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ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

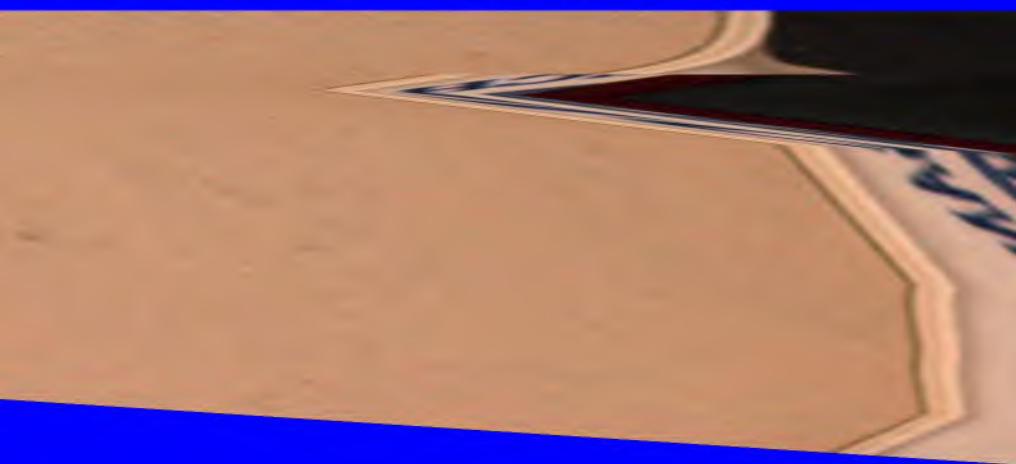
THIRTY-EIGHTH ACADEMIC YEAR.

1887-'88.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1887.

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845, by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10, of that year, under the name of the Naval School, with Commander Franklin Buchanan as Superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first and last were spent at the School, the intervening three being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the School, the students consisted of 36 Midshipmen, of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 Acting Midshipmen, appointed since September of the previous year. The Midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates, until the reorganization of the School, in 1850.

In September, 1849, a Board was appointed to revise the plan and regulations of the Naval School. The Board was composed of the following officers:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the Board was approved, and went into operation July 1, 1850.

The new organization provided for a course of seven years, the first two and the last two at the School and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments, with executive heads, was fully adopted. It was provided that a Board of Visitors should make an annual inspection of the Academy, and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice-ship, and the annual practice-cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the Academic Board on the subject were referred to the Board of Examiners of the year 1851, composed of the following officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the Board of Examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea-service

the middle of the course, thus making the four years of study consecutive. The practice-cruise supplied the place of the omitted sea-service, and gave better opportunities of training. The change went into operation in November, 1851, together with other improvements recommended by the Board. The system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining Acting Midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In September, 1865, the Academy was moved back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1869, all official connection with the Bureau came to an end.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of Acting Third Assistant Engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanism, chemistry, and mechanics, and practical exercises with the steam-engine and in the machine-shop. This class was graduated in June, 1869, together with two Cadet-Engineers who had entered the Academy in 1867. After an interval of four years, in October, 1871, a new class of Cadet-Engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and in 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress, approved February 24, 1874, the course of instruction for Cadet-Engineers was made four years instead of two; and the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of Cadet-Midshipmen or Cadet-Engineers at the Naval Academy, but in lieu thereof Naval Cadets shall be appointed from each Congressional district and at large, as now provided by law for Cadet-Midshipmen, and all the undergraduates at the Naval Academy shall thereafter be designated and called 'Naval Cadets'; and from those who successfully complete the six years' course appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps: *And provided further*, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year, such appointments to be made from the graduates of the year at the conclusion of their six years' course, in order of merit, as determined by the Academic Board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the Academic Board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year 1882. And if there be a surplus of graduates, those who did not receive such appointment shall be given a certificate of graduation, an honorable discharge, and one year's sea-pay, as now provided by law for Cadet-Midshipmen; and so much of section 1321 of the Revised Statutes as is inconsistent herewith is hereby repealed."

"That any Cadet whose position in his class entitles him to be retained in the service, upon his own application, be honorably discharged at the end of four years' at the Naval Academy, with a proper certificate of graduation."

SUPERINTENDENTS
OF THE
UNITED STATES NAVAL ACADEMY.

Assumed command:

Sept. 3, 1845.—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Upshur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.

BOARD OF VISITORS, JUNE, 1887.

Commodore D. B. HARMONY, U. S. N., *President.*

Hon. GEORGE GRAY, U. S. Senate, *Vice-President.*

Hon. NELSON W. ALDRICH,	U. S. Senate.
Hon. HILARY A. HERBERT,	House of Representatives.
Hon. NATHAN GOFF,	House of Representatives.
Hon. JOSEPH D. SAYERS,	House of Representatives.
Hon. WILLIAM A. WALLACE,	Clearfield, Pa.
Hon. HENRY S. VAN EATON,	Woodville, Miss.
President D. C. GILMAN,	Johns Hopkins University.
Col. A. S. MORGAN,	Mount Holly, Ark.
THOMAS A. LOGAN, Esq.,	Cincinnati, Ohio.
Prof. W. G. SUMNER,	Yale College.

ACADEMIC CALENDAR.

1887-1888.

1887.

Oct. 1. Beginning of first term..... Saturday.

1888.

Jan. 23-28. Semi-annual examination Monday-Saturday.

Jan. 28. End of first term Saturday.

May 31. End of academic year, 1887-'88..... Thursday.

June 1-8. Annual examination Friday-Friday.

May 15. Examination of candidates for admission as Naval
Cadets..... Tuesday.

Sept. 1. Examination of candidates for admission as Naval
Cadets..... Saturday.

Oct. 1. Beginning of first term, 1888-'89..... Monday.

The academic months end on the following days:

1887-1888.

October	Oct. 29	February.....	Feb. 25
November.....	Nov. 26	March	Mar. 24
December	Dec. 24	April	Apr. 21
January.....	Jan. 21	May	May 26

1888-1889.

October	Oct. 27	December	Dec. 22
November.....	Nov. 24	January.....	Jan. 19

CALENDAR FOR 1887-1888.

SEPTEMBER.							MARCH.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
				1	2	3					1	2	3
4	5	6	7	8	9	10	4	5	6	7	8	9	10
11	12	13	14	15	16	17	11	12	13	14	15	16	17
18	19	20	21	22	23	24	18	19	20	21	22	23	24
25	26	27	28	29	30		25	26	27	28	29	30	31

OCTOBER.							APRIL.						
						1							
2	3	4	5	6	7	8	1	2	3	4	5	6	7
9	10	11	12	13	14	15	8	9	10	11	12	13	14
16	17	18	19	20	21	22	15	16	17	18	19	20	21
23	24	25	26	27	28	29	22	23	24	25	26	27	28
30	31						29	30					

NOVEMBER.							MAY.						
		1	2	3	4	5		1	2	3	4	5	
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30				27	28	29	30	31		

DECEMBER.							JUNE.						
				1	2	3					1	2	
4	5	6	7	8	9	10	3	4	5	6	7	8	9
11	12	13	14	15	16	17	10	11	12	13	14	15	16
18	19	20	21	22	23	24	17	18	19	20	21	22	23
25	26	27	28	29	30	31	24	25	26	27	28	29	30

JANUARY.							SEPTEMBER.						
1	2	3	4	5	6	7						1	8
8	9	10	11	12	13	14	2	3	4	5	6	7	8
15	16	17	18	19	20	21	9	10	11	12	13	14	15
22	23	24	25	26	27	28	16	17	18	19	20	21	22
29	30	31					23	24	25	26	27	28	29

FEBRUARY.							OCTOBER.						
				1	2	3		1	2	3	4	5	6
5	6	7	8	9	10	11	7	8	9	10	11	12	13
12	13	14	15	16	17	18	14	15	16	17	18	19	20
19	20	21	22	23	24	25	21	22	23	24	25	26	27
26	27	28	29				28	29	30	31			

OFFICERS
ATTACHED TO THE
UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,
COMMANDER W. T. *SAMPSON.

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COMMANDER P. F. HARRINGTON.

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ENSIGN F. J. HARKLER,
ENSIGN M. K. EYRE.

Sword-Master,

A. J. CORBESIER.

Assistant Sword-Masters,

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G. HEINTZ

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ENSIGN W. C. P. MOIR.

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PASSSED ASSISTANT ENGINEER J. S. OGDEN,
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PASSED ASSISTANT SURGEON J. D. GATEWOOD, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

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PASSED ASSISTANT SURGEON H. T. PERCY, M. D.

PAY INSPECTOR T. T. CASWELL, *Pay Officer.*

PAYMASTER J. P. LOOMIS, *Commissary and General Store-keeper.*

PASSED ASSISTANT PAYMASTER M. C. McDONALD, *Assistant to General Store-keeper.*

CHAPLAIN E. K. RAWSON.

ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*

J. J. GRAFF, *Assistant Librarian.*

R. M. CHARR, *Secretary.*

Attached to the Ships.

BOATSWAIN J. S. SINCLAIR,

GUNNER A. HARMAN,

CARPENTER G. W. CONOVER.

MATES.

Attached to the Santee, the Wyoming, and the Phoebe.

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J. HILL,

C. J. MURPHY,

R. G. PERCY,

J. ROGERS,

R. SILVER,

W. G. SMITH.

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CAPTAIN J. M. T. YOUNG,

FIRST LIEUTENANT G. T. BATES.

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THE SUPERINTENDENT.

THE COMMANDANT OF CADETS.

THE HEAD OF THE DEPARTMENT OF SEAMANSHIP, NAVAL TACTICS, AND NAVAL CONSTRUCTION.

THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.

THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.

THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.

THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.

THE HEAD OF THE DEPARTMENT OF MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.

THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

THE HEAD OF THE DEPARTMENT OF PHYSIOLOGY AND HYGIENE.

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L. H. CHANDLER.****CADET-MASTERS.****H. K. BENHAM,
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C. L. A. INGATE.****CADET-ENSIGNS.****W. M. CROSE,
D. W. BESWICK,****A. L. NORTON,
S. J. AIKEN.***Cadet petty-officers of the first class.***G. N. HAYWARD,
A. H. ROBERTSON,
C. B. MORGAN,
M. L. MILLER,****E. E. WEST,
E. K. COLE,
J. F. HUBBARD,
J. H. REID,****L. A. STAFFORD,
W. B. FRANKLIN,
H. A. WILEY,
T. P. KANE.***Cadet petty-officers of the second class.***G. H. ROCK,
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S. E. KITTELLE,
B. S. NEUMANN,****J. B. PATTON,
A. B. HOFF,
N. C. TWINING,
G. L. FERMIER.****C. G. LONG,
G. R. MARVELL,
L. R. DE STEIGUER,
W. D. MACDOUGALL.**

SUMMER CRUISE, 1887.

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UNITED STATES PRACTICE-SHIP CONSTELLATION.

COMMANDER C. L. HUNTINGTON, *Commanding.*
LIEUTENANT E. H. C. LEUTZE, *Executive Officer.*
LIEUTENANT R. MITCHELL, *Navigator.*
LIEUTENANT J. M. ROPER, *Watch Officer.*
ENSIGN J. H. GLENNON, *Instructor in Navigation.*
ENSIGN H. L. P. HUSE, *Watch Officer.*
ENSIGN J. B. BLISH, *Watch Officer.*
ENSIGN S. MORGAN, *Watch Officer.*
ENSIGN M. K. EYRE, *Watch Officer.*
SURGEON M. H. SIMONS.
PASSED ASSISTANT SURGEON R. ASHBURIDGE.
ASSISTANT PAYMASTER G. W. SIMPSON.
CHAPLAIN E. K. RAWSON.

NAVAL CADETS.

First Class.

Aiken,	Gates,	Morgan,
Anderson, L. J.	Hartrath,	Norton, A. L.
Barnett,	Hayward,	Quinby,
Beach,	Hubbard,	Reid,
Benham,	Hughes,	Robertson, A. H.
Beswick,	Ingate,	Robison, S. S.
Brittain,	Kane,	Stafford,
Chandler,	Kornter,	Stickney,
Cole, E. K.	Lejeune,	Vanant,
Cramer,	Marble,	Wilbur,
Croce,	Miller,	Wiley,
Franklin,	Monroe,	

Third Class.

Bailey,	Chase,	Everhart,
Ballechmidt,	Coleman,	Gartley,
Blankenship,	Coulson,	Gibbs,
Bond,	Davis, C.	Holland,
Boatwick,	Dayton,	Holmes,
Beck,	Dinges,	Horne,
Battler,	Dismukes,	Kochersperger,
Catlin, A. W.	Eaton,	Lang,

Third Class—Continued.

Latimer,	Radford,	Snow,
McDonald,	Rano,	Soule,
McVay,	Rising,	Spear,
Moffett,	Ritter,	Sullivan,
Moses,	Ruhm,	Taylor,
Neville,	Ryan, E. D.	Treadwell,
Norton, W. S.	Ryan, J. P. J.	Vogelgesang,
Okell,	Saunders,	White,
Perry,	Schofield,	Williams, G. W.
Price,	Signor,	Ziegemeier,

Fourth Class.

Allen, C.	Lancaster,	Nire,
Althouse,	Lane,	Pollock,
Anthon,	Laws,	Robinson, R.
Blamer,	Leeds,	Robison, J. K.
Carter,	Leonard,	Senn,
Christy,	Low,	Smith, H. E.
Consaul,	Magill,	Smith, L. G.
Emrich,	McGrann,	Theall,
Gross,	McKelvy,	Todd,
Jenkins,	McLemore,	Trickle,
Jewell,	Maurin,	Waller,
Kellogg,	Ninde,	

NAVAL CADETS ON BOARD THE UNITED STATES SHIP SANTEE, RETAINED AT THE
ACADEMY FOR MACHINE-SHOP AND OTHER PRACTICAL INSTRUCTION.

Second Class.

Anderson, E. B.	Kaiser,	Patton,
Bradshaw,	Kittelle,	Phelps,
Brand,	Kirk,	Pratt,
Cole, W. C.	Lewis,	Prochazka,
Danforth,	Long,	Raymond,
Driggs,	Lowndes,	Rock,
Dutton,	Lucas,	Seymour,
Fermier,	Marvell,	Steiguer,
Fuller,	MacDougall,	Terhune,
Gaines,	Mendell,	Thomas,
Harrison,	Mitchell,	Twining,
Hobson,	Neumann,	Williams, P.
Hoff,	Nulton,	Woodward.
Hutchison,	Offley,	

SUMMARY.

On board United States practice-ship <i>Constellation</i>	124
On board United States ship <i>Santee</i>	41

Total	165
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SYNOPSIS OF THE CRUISE.

CONSTELLATION.

Commissioned May 14, 1887. Cadets embarked June 13.

Sailed from Annapolis June 15; went to sea June 27.

Arrived at New London, Conn., July 3.

Cruised in Long Island Sound between New London, Conn., and Newport, R. I., and in Gardiner's Bay till August 12.

Inspected by Naval Board of Inspection at New London, Conn., July 25 and 26.

Arrived at Hampton Roads August 17.

Reached Annapolis August 27.

Cadets disembarked August 28.

RELATIVE STANDING OF NAVAL CADETS AT THE ANNUAL EXAMINATION, JUNE, 1887.

P denotes physically disqualified for the naval service.

† Found deficient, allowed a re-examination, passed, and continued with class.

†† Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

a denotes absence from examination.

Class of naval cadets appointed 1882, performing required service afloat.

Order of merit.	Name.	State from which appointed.	Date of admission.
*1	Kress, Frederick Norton	New York	Oct. 2, 1882
2	Breed, George	Kentucky	June 17, 1882
3	Ballard, William Hannum Grubb	Pennsylvania	Sept. 28, 1882
4	Edgar, Webster Appleton	New York	Sept. 22, 1881
5	Oman, Joseph Wallace	Pennsylvania	June 17, 1882
6	Dodd, Willard Louis	Indiana	Sept. 28, 1882
7	Fonst, William Harry	Ohio	Sept. 28, 1882
8	Andrews, Philip	New Jersey	Sept. 28, 1882
9	Caldwell, William Howell	Tennessee	Sept. 28, 1882
10	Tisdale, Ryland Dillard	Kentucky	Sept. 28, 1882
11	Strite, Samuel Melchoir	Maryland	Sept. 28, 1882
12	Jenkins, Friend William	Pennsylvania	Sept. 28, 1882
13	Levis, Francis Adelbert	New York	June 17, 1882
14	Hines, Harold Kemble	Kentucky	Oct. 2, 1882
15	Cooper, George Franklin	Georgia	June 17, 1882
16	Rumsey, Harry Edgerton	Wyoming	Sept. 28, 1882
17	Witherspoon, Edwin Taylor	Connecticut	Sept. 28, 1882
18	Johnson, Edwin Van Dusen	Indiana	June 17, 1882
19	Hawk, George Frederick	Pennsylvania	June 17, 1882
20	Griswold, John Noble	Wisconsin	Sept. 30, 1882
21	McMillan, John Taylor	California	June 17, 1882
22	Billings, Cornelius Canfield	Vermont	Sept. 28, 1882
23	Winram, Samuel Black	Missouri	June 17, 1882
24	Berry, John Giveen	Maine	June 17, 1882
25	Young, David May	Virginia	Sept. 30, 1882

Class appointed 1883, 44 members.

Order of general merit.	Name.	State.	Date of admission.
1	Stocker, Robert	Minnesota	Sept. 4, 1883
2	Hibbs, Frank Warren	Minnesota	Sept. 4, 1883
3	Snow, Elliot	Utah Territory	Sept. 4, 1883
4	Decker, Benton Clark	Illinois	May 17, 1883
5	Bristol, Mark Lambert	New Jersey	May 19, 1883
6	Wells, Benjamin Warner, Jr.	Illinois	May 17, 1883
7	McCully, Newton Alexander, Jr.	South Carolina	May 19, 1883
8	Burke, Walter Rafford	Illinois	May 17, 1883
9	Cloke, William Snelling	New Jersey	May 17, 1883
10	Stearns, Ben Wade	Iowa	May 17, 1883
11	Bertolette, Levi Calvin	Delaware	Sept. 4, 1883
12	Hurlbut, Samuel Ray	Connecticut	Sept. 4, 1883
13	Moale, Edward, Jr.	Montana	June 17, 1882
14	Bryan, Henry Francis	Ohio	May 2, 1883
15	McMillan, William Graham	North Carolina	Sept. 4, 1883
16	Durell, Edward Hovey	Massachusetts	May 17, 1883
17	Logan, George Wood	Ohio	Sept. 3, 1883
18	Long, Andrew Theodore	North Carolina	May 17, 1883
19	Brown, Ford Hopkins	Iowa	May 17, 1883
20	Peckham, Henry Lincoln	Rhode Island	May 17, 1883
21	Washington, Thomas	North Carolina	May 17, 1883
22	Neale, Archibald Henderson	North Carolina	May 19, 1883
23	Steele, Clarence Morton	Indiana	Sept. 25, 1883
24	Churchill, Creighton	Missouri	Sept. 4, 1883
25	Davis, Archibald Hilliard	North Carolina	May 17, 1883
26	Johnston, Charles Ernest	Ohio	May 17, 1883
27	Draper, Herbert Lemuel	Kansas	Sept. 6, 1883
28	Boughter, Francis	Pennsylvania	May 17, 1883
29	Bliss, Victor	South Carolina	Sept. 6, 1883
30	Pigott, Michael Royston	Massachusetts	Sept. 20, 1883
31	Edmonds, Samuel Preston	Missouri	May 19, 1883
32	Barrage, Guy Hamilton	Massachusetts	Sept. 6, 1883
33	Russell, Frank Mead	Pennsylvania	May 19, 1883
34	Coleman, Ross	California	May 17, 1883
35	Allen, Henry Ace	Wisconsin	Sept. 4, 1883
36	Jackson, Richard Harrison	Alabama	June 4, 1883
37	Swanstrom, Frederick Emil	Minnesota	Sept. 6, 1883
38	Cochran, Claude Stanley	Ohio	Sept. 4, 1883
39	Rallinger, James Grey	Kansas	Sept. 6, 1883
40	Craig, Colin Samuel	Iowa	May 17, 1883
41	Hudson, Charles Edward	Arkansas	Sept. 4, 1883
42	Moseley, William Branch	Texas	Sept. 6, 1883
43	Young, Louis le Sautier	Louisiana	Sept. 6, 1883
44	O'Halloran, Thomas Michael	Pennsylvania	May 17, 1883

performing required service afloat.

Age at date of admission.		Order of merit.								Sea service in practice ships.		
Years.	Months.	Astronomy, navigation, and surveying.	Least squares and strength of materials.	Ordnance and gunnery.	Seamanship, ship-building, and naval tactics.	Practical instruction in steam engineering.	Physiology and hygiene.	Conduct.	Number of demerits.	Months.	Days.	Order of general merit.
17	7	1	1	1	2	4	14	1	0	4	29	*1
15	10	4	3	2	3	2	4	5	2	4	29	*2
17	2	5	5	5	7	1	7	4	1	4	29	*3
15	4	7	6	3	6	2	12	15	12	7	11	4
15	1	8	2	3	1	25	11	38	56	7	11	5
15	4	9	10	11	5	9	5	24	21	7	11	6
15	11	6	7	10	9	24	15	10	6	7	11	7
16	4	11	9	14	12	16	6	11	7	7	11	8
17	3	12	4	8	19	14	12	29	30	7	11	9
15	0	2	12	9	16	14	22	7	5	7	11	10
17	2	7	16	13	11	8	10	30	32	4	29	11
16	10	18	7	7	33	40	30	26	25	4	29	12
15	8	14	10	16	4	16	9	12	9	9	17	13
18	0	17	24	22	24	6	19	35	39	7	11	14
17	6	28	29	19	16	16	19	19	13	4	29	15
17	3	26	34	27	16	4	1	22	16	7	11	16
14	10	10	15	15	27	16	32	32	33	4	29	17
17	1	15	16	17	8	30	15	15	12	7	11	18
16	6	18	18	6	21	22	23	7	5	7	11	19
17	10	24	13	24	10	7	3	15	12	7	11	20
18	0	30	27	24	33	30	36	1	0	7	11	21
15	1	27	28	18	29	33	32	15	12	7	11	22
16	11	19	22	21	13	10	35	25	23	4	29	23
17	0	21	19	11	15	16	7	12	9	4	29	24
16	8	30	35	28	21	10	28	14	10	6	26	25
17	2	32	41	34	42	25	28	19	13	7	11	26
16	8	37	38	39	19	33	15	27	27	4	29	27
14	4	15	14	20	13	42	21	41	61	7	11	28
17	9	22	23	30	38	32	24	5	2	4	29	29
17	7	39	44	43	43	36	2	38	56	4	29	30
15	9	20	36	22	33	25	39	27	27	7	11	31
16	2	34	20	26	24	22	42	1	0	4	29	32
17	4	28	26	29	23	36	15	7	5	7	11	33
15	10	36	39	32	31	29	25	34	38	3	25	34
16	7	39	24	36	37	25	32	33	35	4	29	35
17	0	35	32	33	38	12	25	19	13	7	11	36
16	10	33	40	35	24	12	37	35	39	4	29	37
17	10	24	36	36	33	41	42	30	32	4	29	38
16	2	23	43	31	41	36	30	48	92	4	29	39
17	1	44	30	36	31	36	25	40	59	7	11	40
16	10	39	31	41	29	16	40	23	18	4	29	41
16	9	42	42	44	43	33	41	42	71	4	29	
17	10	42	21	42	28	44	42	37	52	4	29	
16	4	38	32	40	40	43	38	44	107	7		

Order of annual merit.	Name.		State.	Date of admission.
24	Alken, Samuel James		Tennessee	Sept. 4, 1884
25	Anderson, Louis Joseph		Georgia	May 27, 1884
24	Bassett, Frederick Brewster, Jr		New York	May 19, 1884
†	Bays, William Peter		Florida	May 20, 1884
26	Beach, Edward Latimer		Minnesota	May 20, 1884
11	Benham, Henry Kennedy		New York	May 19, 1884
14	Beswick, Delworth Wilson		Michigan	May 20, 1884
7	Brittain, Carlo Bonaparte		Kentucky	May 20, 1884
18	Chandler, Lloyd Horwitz		New Hampshire	Sept. 4, 1884
(d)	Cole, Eli Kelley		New York	Sept. 4, 1883
17	Closs, Hiram Benjamin		Texas	May 22, 1884
23	Cramer, Stuart Warren		Illinois	Sept. 4, 1884
19	Cress, William Michael		Indiana	May 19, 1884
28	Franklin, William Boell		Maryland	May 20, 1884
20	Gates, Herbert Greaville		Michigan	Sept. 4, 1884
16	Hartnath, Armin		Michigan	Sept. 4, 1884
6	Hayward, George North		New York	May 19, 1884
29	Hubbard, John Flavel		New York	Sept. 5, 1884
19	Hughes, Charles Frederic		Maine	Sept. 6, 1884
†	Hull, Robert Carter		At large	May 20, 1884
27	Ingate, Clarence Louis Adrian		Alabama	May 20, 1884
23	Kane, Theodore Porter		New York	May 19, 1884
12	Keebler, Oscar William		Pennsylvania	Apr. 5, 1884
15	Lejeune, John Archer		Louisiana	May 19, 1884
*2	Marble, Frank		New York	Sept. 4, 1884
8	Miller, Marcus Lyon		Massachusetts	Sept. 4, 1884
†	Moore, Moses Daniel		New York	May 19, 1884
5	Morgan, Casey Bruce		Mississippi	Sept. 4, 1884
22	Norton, Albert Leland		Ohio	May 22, 1884
25	Quincy, Edwin Rufus		New York	May 22, 1884
21	Reid, James Henry		Virginia	Sept. 4, 1884
4	Robertson, Ashley Herman		Illinois	Sept. 4, 1884
10	Robison, Samuel Kheelburn		Pennsylvania	Sept. 6, 1884
23	Stafford, Leroy Augustus		Louisiana	Sept. 15, 1884
22	Stickney, Herman Osmas		Kentucky	Sept. 4, 1884
*1	Vannant, William Newton		Pennsylvania	Sept. 4, 1884
9	West, Ernest Edward		Georgia	May 22, 1884
*3	Wilbur, Curtis Dwight		Dakota	May 19, 1884
21	Wiley, Henry Aristo		Texas	May 17, 1884

* See page 25.

d Turned back from class appointed 1883

37 members.

Age at date of admission.		Order of merit.								Sea-service in practice-ships.		
Years.	Months.	Mechanical drawing.	International law.	Calculus and mechanics.	Sound, light, and heat.	Electricity and magnetism.	Steam machinery, marine engines, and boilers.	Conduct.	Number of demerits.	Months.	Days.	Order of annual merit.
17	7	34	14	20	26	22	24	9	37	5	8	24
17	10	26	24	18	22	26	22	24	69	7	20	25
15	4	29	33	27	34	34	34	27	81	7	20	34
15	6	18	30	38	38	38	38	12	40	5	5	†
16	10	27	14	24	26	32	31	8	36	7	20	23
16	9	30	27	11	5	12	18	21	57	7	20	11
15	8	13	14	23	18	14	17	7	27	7	20	14
17	4	24	6	12	11	17	8	19	48	7	20	7
15	0	8	11	30	25	12	19	4	21	5	8	18
16	0	(a)	(a)	(a)	(a)	(a)	(a)	-----	-----	7	14	(d)
17	8	16	34	21	9	4	15	32	147	5	5	17
16	5	6	25	35	29	27	31	20	51	5	8	29
17	3	4	4	23	14	19	11	22	59	7	20	13
16	3	10	22	37	23	27	26	2	13	7	20	26
17	4	20	12	36	33	20	30	17	47	5	8	30
16	0	26	2	10	13	5	14	38	198	5	8	16
17	11	11	17	8	3	9	7	35	181	7	20	6
17	2	27	13	19	6	10	20	33	156	5	8	20
17	10	21	20	34	15	24	11	11	38	5	8	19
14	7	36	37	16	17	34	37	34	176	5	5	5
16	4	12	26	25	29	23	22	28	84	7	20	27
15	2	22	35	26	36	27	27	30	114	7	20	33
17	10	30	17	9	19	30	6	26	76	7	20	12
17	4	33	17	15	20	14	16	16	44	7	20	15
17	0	2	9	2	4	2	2	14	42	5	8	*2
17	11	14	20	13	8	17	10	15	43	5	8	8
17	7	25	30	27	36	36	36	31	134	7	20	†
16	10	5	3	6	7	8	4	29	105	5	8	5
17	11	7	6	32	29	25	20	3	19	7	20	22
14	9	33	33	31	28	37	36	37	184	7	20	35
14	9	19	29	7	32	20	25	5	25	5	8	21
10	8	3	9	5	10	6	4	6	26	5	8	4
17	3	15	8	14	16	14	11	23	66	5	8	10
14	9	23	32	3	21	7	27	36	182	5	8	23
16	8	9	35	32	34	33	31	13	41	5	8	32
15	6	1	1	1	1	1	1	17	47	5	8	*1
16	10	16	28	17	12	10	9	9	37	5	5	9
17	5	32	4	3	2	3	3	1	11	6	20	*3
16	3	35	23	27	24	30	29	25	74	7	9	31

Order of annual merit.

	Name.	State.	Date of admission.
1	Anderson, Ernest Bentley	Kentucky	May 22, 1885
28	Bradshaw, George Brown	Texas	Sept. 4, 1885
31	Brand, Charles Augustine	Connecticut	Sept. 8, 1885
37	Carney, Robert Ernest	Wisconsin	May 21, 1885
18	Cole, William Carey	Illinois	Sept. 5, 1885
12	Danforth, George Washington	Missouri	Sept. 7, 1885
40	Driggs, Louis Labadie	Nebraska	Sept. 28, 1885
32	Dutton, Robert McMillan	California	Sept. 4, 1885
5	Emerson, Selden	Kansas	May 22, 1885
34	Fernier, George Lucien	Indiana	May 21, 1885
23	Fuller, Ben Hebard	Michigan	May 22, 1885
27	Gaines, Edward	Missouri	May 21, 1885
1	Harrison, William Kelley	Texas	May 23, 1885
3	Hobson, Richmond Pearson	Alabama	May 21, 1885
1	Hoff, Arthur Bainbridge	At large	Sept. 28, 1885
5	Hutchison, Benjamin Franklin	Missouri	Sept. 5, 1885
6	Johna, Vandyke	Maryland	Sept. 23, 1885
6	Johnson, Sydney Smith	Texas	Sept. 7, 1885
17	Kaiser, Louis Anthony	Illinois	May 20, 1885
20	Kirk, George William	Missouri	Sept. 7, 1885
7	Kittelle, Sumner Ely	New York	May 19, 1885
20	Lewis, Frederick Nelson	New York	May 22, 1885
9	Long, Charles Grant	Massachusetts	Sept. 7, 1885
16	Lowndes, Edward Rutledge	Michigan	Sept. 20, 1885
11	Lucas, Lewis Clarke	Ohio	Sept. 8, 1885
13	MacDougall, William Dugald	New York	May 19, 1885
19	Magruder, Thomas Pickett	Mississippi	Sept. 2, 1885
6	Marvell, George Ralph	Massachusetts	Sept. 7, 1885
20	Mendell, George Henry, Jr.	California	Sept. 8, 1885
20	Mitchell, George Grant	Indiana	Sept. 7, 1885
1	Montgomery, Wallace Blount	Alabama	Sept. 5, 1885
14	Neumann, Bertram Stansbury	New Jersey	May 22, 1885
10	Nelson, Louis McCoy	Virginia	Sept. 8, 1885
15	Osley, Cleland Nelson	Indiana	Sept. 5, 1885
20	Pattou, John Bryson	South Carolina	May 21, 1885
10	Phelps, William Woodward	Maryland	May 19, 1885
8	Pratt, William Venable	Maine	Sept. 8, 1885
1	Preston, Charles Francis	Maryland	Sept. 4, 1885
41	Prochaska, Julius	Wisconsin	Sept. 7, 1885
11	Raymond, William Wile	Massachusetts	Sept. 7, 1885
2	Roth, George Henry	Michigan	May 20, 1885
20	Reynour, William Henry	Alabama	May 27, 1885
24	Reigner, Louis Rudolph de	Ohio	Mar. 17, 1885
21	Torhune, Warren Jay	New Jersey	May 19, 1885
22	Thomas, Cally Fleming	Tennessee	May 21, 1885

42 members.

Age at date of admission.		Order of merit.						Sea service in practice ships.			
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the Constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Number of demerits.	Months.	Days.	Order of annual merit.
16	8	42	45	43	44	46	25	88	5	10	†
16	4	13	23	31	17	40	44	186	2	17	28
17	4	25	38	28	16	25	26	146	2	17	31
16	5	38	18	36	15	35	40	170	4	19	37
17	1	16	11	10	25	38	34	138	2	17	18
17	7	18	7	12	19	22	10	44	2	17	12
17	1	42	37	16	38	30	44	186	2	17	40
15	10	35	27	20	36	10	39	154	2	17	32
17	10	50	50	41	46	32	33	130	4	17	§
17	2	32	38	47	44	13	14	50	4	17	34
15	3	25	29	30	23	9	40	170	4	17	23
17	6	24	32	32	34	33	20	82	4	17	27
14	10	41	47	38	32	30	18	81	5	10	†
14	9	2	6	4	4	24	10	44	5	10	3
15	9	3	1	1	1	10	4	31	1	8	1
17	7	5	4	5	2	33	13	47	2	17	5
17	7	49	44	26	32	41	10	44	2	17	§
17	2	47	38	35	43	49	31	123	2	17	§
15	1	11	26	26	22	29	27	111	5	10	17
17	1	29	36	21	38	22	24	96	2	17	29
17	11	20	12	3	8	4	5	33	5	10	7
17	1	36	43	33	24	43	28	112	4	8	39
15	9	12	20	17	6	14	3	24	2	17	9
17	8	8	16	38	47	1	48	224	2	17	16
17	10	14	22	13	11	7	23	84	2	17	11
16	11	33	8	14	9	5	17	64	5	10	13
17	10	17	9	18	14	25	46	196	2	17	19
16	0	4	24	34	42	2	1	14	2	17	6
17	1	34	34	19	10	42	26	97	2	17	30
16	0	25	30	48	20	15	18	81	2	17	26
17	10	42	49	49	50	44	9	41	2	17	§
17	7	23	13	28	30	5	7	39	5	10	14
16	1	14	14	25	13	3	5	33	2	17	10
16	3	20	18	36	17	17	8	40	2	17	15
17	11	9	14	45	27	15	42	178	5	10	20
15	6	30	21	40	35	12	43	183	5	10	33
16	6	7	10	9	7	18	37	149	2	17	8
14	4	45	47	50	48	36	23	83	2	17	§
16	10	38	31	45	38	39	47	200	2	17	41
17	1	48	42	41	38	27	32	124	2	17	††
16	6	1	3	7	5	8	2	16	5	10	2
17	5	25	25	44	27	49	30	116	5	10	38
18	0	19	38	24	29	28	29	114	5	10	
16	1	10	5	8	36	48	50	236	5	10	
16	11	31	28	15	12	37	16	63	5	1	

Second class—

Order of annual merit.	Name.	State.	Date of admission.
4	Twining, Nathan Creek	Wisconsin	Sept. 4, 1885
225	Webb, Thomas Shappard	Tennessee	Oct. 2, 1885
38	Williams, Philip	Vermont	Sept. 4, 1885
6	Woods, Howard Thorpe	Kansas	May 12, 1885
36	Woodward, Henry Lake	New York	May 12, 1885

42 members—Continued.

Age at date of admission.		Order of merit.						Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the Constitution.	French and Spanish.	Mechanical drawing.	Conduct.		Months.	Days.	
16	8	6	3	2	3	19	20	82	3	17	4
16	9	40	32	10	30	20	15	60	2	17	25P
15	7	20	16	22	20	44	40	230	3	17	35
16	5	46	46	23	48	20	38	152	5	10	5
17	1	37	34	6	26	47	35	130	5	10	36

Order of annual merit.

	Name.	State.	Date of admission.
17	Halley, Claude	Arkansas	Sept. 8, 1886
50	Ballachmider, Frederick William	Wisconsin	Sept. 4, 1886
16	Blankenship, John Millington	Virginia	May 20, 1886
47	Bond, Charles Otis	Iowa	Sept. 8, 1886
28	Boatwick, Lucius Allyn	Massachusetts	Sept. 7, 1886
8	Buck, William Henry	Mississippi	May 22, 1886
28	Buttler, Charles Voorhees	New Jersey	Sept. 7, 1886
25	Catlin, Albertus Wright	Minnesota	May 24, 1886
*4	Chase, John Valentine	Louisiana	Sept. 28, 1886
*3	Coleman, Noah Tunsickiff	New York	May 21, 1886
5	Coulson, Ben Le Favre	Ohio	Sept. 6, 1886
*6	Davis, Cleland	Kentucky	May 22, 1886
26	Dayton, John Havens	At large	Sept. 12, 1886
46	Dingus, John William	Pennsylvania	Sept. 7, 1886
44	Dismukes, Doctor Eugene	Mississippi	May 21, 1886
34	Eaton, Frederick Lloyd	Michigan	Sept. 6, 1886
36	Edie, John Rufus	At large	May 19, 1886
31	Everhart, Lay Hampton	Alabama	May 20, 1886
24	Gartley, Alonso	Iowa	May 22, 1886
19	Gibbs, George Fort	District of Columbia	May 19, 1886
5	Harness, Conrad	Texas	May 24, 1886
51	Holland, Frank	Michigan	May 22, 1886
36	Holmes, Urban Tigner	Arkansas	Sept. 12, 1886
53	Horne, Adrian Lorenzo	New Hampshire	May 22, 1886
45	Kochersperger, Frank Henry	Pennsylvania	May 20, 1886
41	Lang, Edward Emilious	Ohio	May 20, 1886
49	Latimer, Julius Lane	West Virginia	Sept. 20, 1886
(6)	Leonard, Will Walker	Texas	Sept. 20, 1886
52	McDonald, Erwin Huntington	New York	Sept. 7, 1886
27	McVay, Charles Butler	Colorado	May 19, 1886
21	Moffatt, William Adger	South Carolina	Sept. 6, 1886
9	Moses, Lawrence Henry	New York	Sept. 29, 1886
29	Neville, Wendell Cushing	Virginia	Sept. 12, 1886
38	Norton, Walter Smith	New York	Sept. 7, 1886
48	Okell, Frank Thophilus	Pennsylvania	May 20, 1886
62	Perry, William Yules	Florida	May 22, 1886
23	Price, Claude Bernard	Mississippi	June 2, 1886
43	Radford, Cyrus Sugg	Kentucky	May 25, 1886
22	Raso, Henry Warren	New York	May 20, 1886
30	Rising, Franklin Sidney	Nevada	May 20, 1886
22	Ritter, Henry Snyder	Pennsylvania	May 25, 1886
*1	Ruhn, Thomas Francis	Tennessee	May 20, 1886
41	Ryan, Eugene Dewey	New York	Sept. 4, 1886
40	Ryan, John Paul Joseph	New York	Sept. 6, 1886
37	Saunders, William Turner	At large	May 21, 1886
7	Schubfeld, Frank Herman	New York	May 21, 1886

* See page 26.

b Turned back.

53 members.

Age at date of admission.		Order of merit.				Number of demerits.	Sea service in practice ships.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French and Spanish.	Conduct.		Months.	Days.	
15	10	37	14	9	23	49	2	15	17
16	4	40	51	52	31	61	2	15	50
17	9	11	24	19	5	13	5	2	16
15	9	38	46	42	19	37	2	15	47
16	6	20	34	51	13	30	2	15	38
17	7	4	17	15	12	28	5	2	8
17	7	13	28	37	34	67	2	15	28
17	5	32	18	28	43	82	5	2	25
17	8	24	5	6	15	31	2	15	4
16	2	3	6	16	49	106	5	2	3
15	8	57	48	57	34	67	2	15	5
16	6	7	10	8	39	74	5	2	6
17	11	6	33	33	44	89	2	15	26
16	9	35	45	42	28	54	2	15	46
16	7	32	40	45	38	72	5	2	44
16	5	22	30	27	55	159	2	15	34
15	7	54	46	4	40	77	2	17	36
16	5	50	8	35	54	126	5	2	31
16	7	20	12	47	87	69	5	2	24
16	2	32	42	1	20	42	5	2	19
15	5	55	57	53	26	52	2	17	5
17	6	45	36	56	47	103	5	2	51
17	4	24	28	30	52	124	2	15	35
16	2	56	51	54	42	80	5	2	55
16	3	41	36	49	26	52	5	2	45
14	10	14	8	21	45	90	5	2	11
17	11	44	50	41	51	120	2	15	49
16	9	a	a	a	1	3	2	15	(b)
16	10	49	55	45	48	105	2	15	52
17	7	48	20	26	8	23	2	2	27
16	10	15	44	9	9	26	2	15	21
16	2	10	7	2	58	272	2	15	9
16	11	42	21	23	23	49	2	15	29
16	6	50	51	54	29	56	2	15	53
16	11	28	56	49	30	58	5	2	48
16	9	38	54	23	32	64	5	2	42
17	7	27	36	32	6	18	5	2	33
17	11	42	34	39	22	46	5	2	43
17	3	19	30	31	7	19	5	2	23
16	11	24	27	12	15	31	5	2	20
16	3	28	21	38	9	26	5	2	32
16	6	1	2	2	17	32	5	2	1
16	6	53	49	16	13	30	2	15	41
15	11	28	41	34	34	67	2	15	22
16	1	45	21	39	9	26	5	2	
17	4	5	11	22	4	11	5	2	

Third class—

Order of annual meet.

	Name.	State.	Date of admission.
15	Signor, Matt Howland	Nebraska	May 21, 1886
22	Snow, William Alanson	Massachusetts	Sept. 4, 1886
30	Soule, John Lutman	Illinois	Sept. 4, 1886
*2	Spear, Lawrence	Ohio	May 18, 1886
39	Sullivan, Franklin Buchanan	At large	May 21, 1886
13	Taylor, Montgomery Meigs	At large	May 21, 1886
14	Treadwell, Thomas Conrad	Massachusetts	May 21, 1886
12	Vogelgraag, Charles Theodore	California	Sept. 4, 1886
53	Ward, George Creighton	New York	May 21, 1886
118	White, Chester Bailey	Missouri	Sept. 4, 1886
*4	Williams, George Washington	South Carolina	Sept. 23, 1886
10	Zelgmeier, Henry Joseph	Ohio	May 21, 1886

* See page 35.

53 members—Continued.

Age at date of admission.		Order of merit.				Number of demerits.	Sea service in practice ships.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French and Spanish.	Conduct.		Months.	Days.	
15	5	45	1	28	52	124	5	2	15
16	7	16	39	23	3	10	2	15	22
17	4	28	16	47	23	49	2	15	30
15	6	2	4	14	33	65	5	2	2
14	10	36	32	36	46	100	4	2	39
16	7	12	16	5	50	117	5	2	13
16	11	16	14	19	41	78	5	2	14
17	7	8	24	12	18	35	2	15	13
17	10	52	43	42	57	205	3	17	53
17	11	16	26	16	21	45	2	15	18
17	1	9	3	6	56	196	2	15	4
17	1	23	13	11	1	3	5	2	10

Fourth class—97 members.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
Allen, Charles	Ohio	May 21, 1887	17	1	2	15
Allen, David Van Horn	Tennessee	Sept. 6, 1887	17	3		
Althouse, Adelbert	Illinois	May 21, 1887	18	0	2	15
Anthony, Archibald	New York	June 8, 1887	16	10	2	15
Artson, Edgar Emmet	Pennsylvania	Sept. 5, 1887	14	6		
Beck, William Walker	Maryland	Sept. 6, 1887	17	7		
Belknap, Reginald Rowan	Arkansas	Sept. 5, 1887	16	3		
Bieror, Bion Barnett	Kansas	Sept. 24, 1887	17	6		
Blamer, De Witt	Iowa	May 19, 1887	15	4	2	
Blount, Irving	Indiana	Sept. 6, 1887	17	6		
Breckinridge, Joseph Cabell	Kentucky	Sept. 28, 1887	15	7		
Brotherton, William Daniel	Wisconsin	Sept. 6, 1887	16	11		
Caldwell, Harry Handly	Illinois	Sept. 7, 1887	14	7		
Camden, Bernard Holt	West Virginia	Aug. 27, 1887	18	0		
Carter, James Francis	Pennsylvania	Mar. 24, 1887	18	0	2	15
Christy, Harley Hansibal	Ohio	May 24, 1887	16	8	2	15
Cossaul, Charles Follett	Michigan	May 21, 1887	16	8	2	15
Cook, Allen Merriam	Kansas	Sept. 6, 1887	16	11		
Cotton, Charles Stanhope		Sept. 7, 1887	17	6		
Curlett, John	Virginia	Sept. 8, 1887	17	6		
Davis, Austin Rockwell	Georgia	Sept. 7, 1887	16	2		
Embrey, Wiley Sims	Tennessee	Sept. 6, 1887	17	6		
Emrich, Charles Rulf	Illinois	May 19, 1887	16	8	2	15
Evans, Waldo	Kansas	Sept. 7, 1887	17	10		
Flowers, Robert Lee	North Carolina	Sept. 7, 1887	16	10		
Ford, William Howland		Sept. 7, 1887	16	7		
Gilchrist, Clarence Dyer	Indiana	Sept. 12, 1887	17	6		
Gillmor, Horatio Gonzalo	Wisconsin	Sept. 5, 1887	17	8		
Goodwin, Leonard	Pennsylvania	Sept. 5, 1887	16	4		
Gross, Louis Herman	Illinois	May 19, 1887	16	2	2	15
Hartung, Renwick John	Iowa	Sept. 6, 1887	17	0		
Hough, Henry Hughes	Massachusetts	Sept. 6, 1887	16	8		
Irwin, Noble Edward	Ohio	Sept. 29, 1887	18	0		
Jenkins, Thomas Leoline	North Carolina	May 21, 1887	17	10	2	15
Jewell, Charles Theodore	At large	May 19, 1887	15	3	2	15
Jones, Heriah Ellwood	At large	Sept. 6, 1887	16	8		
Kellogg, Thomas Steele	At large	May 21, 1887	15	9	2	15
Kilbourne Joseph Coolidge	Ohio	Sept. 6, 1887	16	7		
Kornali, Henry Charles	Wisconsin	Sept. 6, 1887	16	4		
Lancaster William Lycurgus	Alabama	May 22, 1887	17	2	2	15
Lane, Rufus Herman	Ohio	June 2, 1887	16	7	2	15
Larkin, Roster Bonaparte	Virginia	Sept. 7, 1887	16	1		
Lawa, George William	Iowa	May 21, 1887	17	3	2	15
Leeds, Joseph Allen	Pennsylvania	May 19, 1887	17	5	2	15
Leigh, Richard Henry	Mississippi	Sept. 6, 1887	17	1		
Leonard, Will Walker	Texas	Sept. 26, 1886	16	9	2	15
Low, Robeson Lee	Pennsylvania	May 21, 1887	16	3	2	15
Lytle Charles William	Virginia	Sept. 5, 1887	17	1		
Macfarland, Horace Greeley	New York	Sept. 6, 1887	16	9		

Fourth class—97 members—Continued.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
Magill, Louis John . . .	Pennsylvania . .	June 17, 1887	16	4	2	15
Malone, John Cary . . .	West Virginia . .	Sept. 6, 1887	16	6		
McGrann, William Hugh . .	Tennessee . . .	May 20, 1887	17	7		
McKeage, Robert . . .	Pennsylvania . .	Sept. 5, 1887	17	4		
McKelvy, William Neesler . .	Pennsylvania . .	May 20, 1887	17	11	2	15
McLemore, Albert Sidney . .	Tennessee . . .	May 23, 1887	18	0	2	15
McReavy, Herbert Ellsworth . .	Washington Ter. .	Sept. 7, 1887	15	11		
Maurin, Timothy Francis . .	Louisiana . . .	May 21, 1887	16	9	2	15
Merrill, Clarence Sidney . .	Connecticut . . .	Sept. 7, 1887	16	10		
Moale, John Gray Foster . .	California . . .	Sept. 6, 1887	16	8		
Murphey, Charles Kemp . . .	Tennessee . . .	Sept. 7, 1887	16	6		
Myers, John Twigg . . .	Georgia . . .	Sept. 27, 1887	16	8		
Ninde, Daniel Benjamin . . .	Indiana . . .	May 20, 1887	16	10	2	15
Nire, Kaga Kazu . . .	Empire of Japan .	May 21, 1887	17	8	2	15
Nott, George William . . .	Louisiana . . .	Sept. 7, 1887	18	0		
Owaley, Letcher . . .	Kentucky . . .	Sept. 7, 1887	17	6		
Pillot, Peter Stuyvesant . .	Nebraska . . .	Sept. 7, 1887	16	10		
Pollock, Edwin Taylor . . .	Ohio . . .	May 20, 1887	16	7	2	15
Preston, Charles Francis . .	Maryland . . .	Sept. 6, 1887	16	4		
Reed, Milton Eugene . . .	Iowa . . .	Sept. 5, 1887	17	10		
Reese, William James . . .	Texas . . .	Sept. 5, 1887	17	6		
Richards, George . . .	Ohio . . .	Sept. 12, 1887	15	7		
Ridgely, Randolph . . .	Georgia . . .	Sept. 6, 1887	16	10		
Robinson, Roby . . .	Alabama . . .	May 21, 1887	16	0	2	15
Robison, John Keeler . . .	Michigan . . .	May 20, 1887	16	6	2	15
Rowan, John Howard . . .	Pennsylvania . .	Sept. 27, 1887	16	8		
Russell, Edward Gaston . . .	Georgia . . .	Sept. 7, 1887	17	9		
Saes, Maurice . . .	Texas . . .	Sept. 7, 1887	15	1		
Senn, Thomas Jones . . .	South Carolina . .	May 19, 1887	15	5	2	15
Shepard, George Hugh . . .	Wisconsin . . .	Sept. 27, 1887	15	9		
Smith, Harry Eaton . . .	Ohio . . .	May 20, 1887	17	8	2	15
Smith, Henry Gorrish . . .	Ohio . . .	Sept. 5, 1887	17	5		
Smith, Lucian Greathouse . .	Illinois . . .	June 8, 1887	17	6	2	15
Sparkman, Sullivan Thomas .	South Carolina . .	Sept. 24, 1887	17	9		
Stearns, Clark Daniel . . .	Michigan . . .	Sept. 5, 1887	17	3		
Sypher, Jay Hale . . .	Arizona . . .	Sept. 5, 1887	16	6		
Theall, Elisha . . .	New York . . .	May 23, 1887	14	5	2	15
Todd, Van Dyke . . .	Texas . . .	May 21, 1887	16	11	2	15
Trickle, Edward . . .	Illinois . . .	May 20, 1887	17	7	2	15
Waller, William Lewis . . .	Virginia . . .	May 21, 1887	17	11	2	15
Watt, Richard Morgan . . .	Pennsylvania . .	Sept. 23, 1887	15	3		
Weaver, Van Wyck . . .	. . .	Sept. 7, 1887	17	5		
Wedekind, George . . .	New York . . .	Sept. 7, 1887	15	7		
Wells, Chester . . .	Pennsylvania . .	Sept. 10, 1887	16	11		
Willard, Arthur Lee . . .	Missouri . . .	Sept. 7, 1887	17	7		
Williams, Dion . . .	Ohio . . .	July 18, 1887	17	5		
Williams, John Clinton . . .	Virginia . . .	Sept. 6, 1887	17	6		
Zahn, Frank Baker . . .	Pennsylvania . .	Sept. 5, 1887	16	9		

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

October 25, 1887.

First class	37 members
Second class	42 members
Third class	53 members.
Fourth class	97 members
Total	229

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

November 21, 1886, to October 25, 1887.

APPOINTED ENSIGN, U. S. NAVY.

Naval Cadet Harrison Augustus Bispham, class of 1885	July 1, 1887
Naval Cadet Volney Ogle Chase, class of 1885	July 1, 1887
Naval Cadet Robert Edward Coontz, class of 1885	July 1, 1887
Naval Cadet Albert Christian Dieffenbach, class of 1885	July 1, 1887
Naval Cadet Edward Walter Eberle, class of 1885	July 1, 1887
Naval Cadet George Robert Evans, class of 1885	July 1, 1887
Naval Cadet Theodore Cornell Fenton, class of 1885	July 1, 1887
Naval Cadet William Wirt Gilmer, class of 1885	July 1, 1887
Naval Cadet George Washington Kline, class of 1885	July 1, 1887
Naval Cadet Charles Monod McCormick, class of 1885	July 1, 1887
Naval Cadet John Patrick McGuinness, class of 1885	July 1, 1887
Naval Cadet William Gardner Miller, class of 1885	July 1, 1887
Naval Cadet David Small Nes, class of 1885	July 1, 1887
Naval Cadet Robert Lee Russell, class of 1885	July 1, 1887
Naval Cadet Armistead Rust, class of 1885	July 1, 1887
Naval Cadet James Elliott Shindel, class of 1885	July 1, 1887
Naval Cadet George Ralph Slocum, class of 1885	July 1, 1887
Naval Cadet Charles Semmes Stanworth, class of 1885	July 1, 1887
Naval Cadet Joseph Strauss, class of 1885	July 1, 1887
Naval Cadet Glennie Tarbox, class of 1885	July 1, 1887
Naval Cadet John Godwin Tawressey, class of 1885	July 1, 1887
Naval Cadet Benjamin Wright, class of 1885	July 1, 1887

HONORABLY DISCHARGED.

Naval Cadet James Thomas Bootes, class of 1885	June 30, 1887
Naval Cadet Albert Burnstine, class of 1885	June 30, 1887
Naval Cadet Charles Macon Corpening, class of 1885	June 30, 1887
Naval Cadet Arthur Henry Dutton, class of 1885	June 30, 1887
Naval Cadet Walter Waller Joynes*, class of 1885	June 30, 1887
Naval Cadet Benjamin Mathews Lombard†, class of 1885	June 30, 1887

Naval Cadet William McKay*, class of 1885	June 30, 1887
Naval Cadet Charles Carroll Poe, class of 1885	June 30, 1887
Naval Cadet Thomas Bog Slade, class of 1885	June 30, 1887

RESIGNED.

Naval Cadet James Nelson Alexander, second class	Feb. 4, 1887
Naval Cadet Harvey Carroll Alford, third class	May 4, 1887
Naval Cadet George Henry Ament, fourth class	Feb. 14, 1887
Naval Cadet Robert Wilson Beale, fourth class	Feb. 14, 1887
Naval Cadet William Walker Beck, fourth class	Feb. 4, 1887
Naval Cadet Edmund Ingles Berkeley, fourth class	Feb. 17, 1887
Naval Cadet John Sylvanus Carnahan, first class	Mar. 1, 1887
Naval Cadet Porter Chandler, fourth class	Feb. 14, 1887
Naval Cadet Roten Nelson Chappell, fourth class	Feb. 14, 1887
Naval Cadet Edward Edmund Clement, second class	May 11, 1887
Naval Cadet Hiram Benjamin Close, second class	Sept. 7, 1887
Naval Cadet Ben Le Ferre Coulson, fourth class	Oct. 4, 1887
Naval Cadet Melville Demarest, fourth class	Feb. 14, 1887
Naval Cadet Selden Emerson, third class	July 1, 1887
Naval Cadet Charles James Edwards Erd, fourth class	Feb. 21, 1887
Naval Cadet William Henry Gould, second class	Feb. 17, 1887
Naval Cadet Frank McDonald Gowey, fourth class	Feb. 23, 1887
Naval Cadet Henry Thaddens Green, fourth class	Feb. 14, 1887
Naval Cadet Conrad Harness, fourth class	June 11, 1886
Naval Cadet Thomas Leoline Jenkins, fourth class	Mar. 31, 1887
Naval Cadet Vandyke Johns, third class	June 17, 1887
Naval Cadet Sydney Smith Johnson, third class	June 23, 1887
Naval Cadet Robert Morris Kennedy, third class	May 26, 1887
Naval Cadet Claude Hamilton Kinnear, second class	Feb. 7, 1887
Naval Cadet William Daniel Kochersperger, second class	Feb. 14, 1887
Naval Cadet Daniel Henry Kremer, fourth class	Feb. 15, 1887
Naval Cadet William Lyeurgus Lancaster, fourth class	Feb. 11, 1887
Naval Cadet Walter Dyer Litchfield, fourth class	May 25, 1887
Naval Cadet John Joseph Martin, second class	Jan. 7, 1887
Naval Cadet Thomas John Mason, fourth class	Feb. 14, 1887
Naval Cadet Albert Sidney McLeomore, third class	April 29, 1887
Naval Cadet Edmund Preston Melson, second class	Feb. 4, 1887
Naval Cadet Wallace Blount Montgomery, third class	June 17, 1887
Naval Cadet Joseph Ralston Morris, second class	Feb. 5, 1887
Naval Cadet John Drake Stockton Mullen, fourth class	Feb. 9, 1887
Naval Cadet Ignatius Ingoldsby Murphy, second class	April 20, 1887
Naval Cadet George Howard Paul, fourth class	Feb. 17, 1887
Naval Cadet Charles Francis Preston, third class	June 17, 1887
Naval Cadet William Wise Raymond, third class	Oct. 10, 1887
Naval Cadet Charles Francis Regan, fourth class	Feb. 14, 1887
Naval Cadet Ziba Wells Reynolds, fourth class	Feb. 23, 1887
Naval Cadet Henry James Rightor, third class	Jan. 27, 1887
Naval Cadet Willie McDaniel Rowan, second class	Feb. 11, 1887
Naval Cadet John Bennett Seeley, third class	Feb. 17, 1887
Naval Cadet George Shepley Selfridge, second class	Mar. 1, 1887
Naval Cadet Horatio Clay Sexton, third class	Nov. 23, 1886
Naval Cadet John Sheehan, fourth class	Feb. 14, 1887
Naval Cadet Frederick Shellaberger, fourth class	Feb. 17, 1887

* Physical disqualification.

Naval Cadet Glenn Shepard Smith, fourth class	Feb. 14, 1887
Naval Cadet William Clarkson Van Antwerp, second class	Jan. 11, 1887
Naval Cadet Chester Bailey White, third class	Oct. 7, 1887
Naval Cadet Henry White Williams, fourth class	Mar. 2, 1887
Naval Cadet John Gilbert Willis, fourth class	May 31, 1887
Naval Cadet Howard Thorpe Woods, third class	June 17, 1887

DISMISSED.

Naval Cadet James William Clinton*, fourth class	Feb. 10, 1887
Naval Cadet George Buchanan Fife*, fourth class	Feb. 10, 1887
Naval Cadet Augustus Francis Horne, fourth class (dropped) . . .	Mar. 1, 1887
Naval Cadet Robert Carter Hull, second class (dropped)	Sept. 26, 1887
Naval Cadet Edward Emilius Lang*, third class	Sept. 27, 1887
Naval Cadet Charles Waller Potter*, third class	April 8, 1887
Naval Cadet Thomas Shappard Webb†, third class (dropped) . . .	Sept. 26, 1887

* For hazing.

† Physically disqualified.

MERIT-ROLLS FOR 1886-'87.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 64, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for conduct, is the final mark of the cadet for the year.

In the case of cadets who take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls."—(Regulations U. S. Naval Academy, § 150.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum, read "passed with distinction;" those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum, read "passed."

P, denotes physically disqualified for the naval service.

†, denotes found deficient, allowed a re-examination, and continued with class.

††, found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§, found deficient, and recommended to be dropped.

a, denotes absence from examination.

24	Coonts, Robert Edward	40.95	34.32	34.56	30.00	13.50	8.91	162.24	555.24	717.48	Ensign.
25	Wright, Benjamin	38.75	36.48	36.12	33.60	16.20	9.84	171.90	545.28	717.27	Ensign.
26	Slade, Thomas Bog	35.25	26.76	36.04	27.60	12.00	10.65	147.30	563.48	715.78	Honorably discharged.
27	Poe, Charles Carroll	35.25	30.00	22.68	30.12	19.50	9.69	147.24	549.45	696.69	Honorably discharged.
28	Burnstine, Albert	39.00	32.52	32.28	30.60	15.00	8.91	158.31	523.25	686.56	Honorably discharged.
29	Corpenning, Charles Macon	39.75	28.20	36.00	27.06	13.80	8.76	151.47	527.60	680.07	Honorably discharged.
30	Bootes, James Thomas	39.75	36.04	30.84	28.92	13.50	9.81	157.86	515.21	673.07	Honorably discharged.
	Dutton, Arthur Henry	37.50	34.44	30.60	30.60	16.20	8.94	158.28	527.86	686.14	Honorably discharged.
	Thompson, Alexander								606.17		Absent. Not examined. ^d

^b At his own request.

^c Eyes injured not in line of duty. At his own request and by advice of medical officer, did not attempt written examination; examined orally; waived class number. Placed next below Naval Cadet Bootes by vote of the Academic Board.

^d Recommended to be dismissed, by vote of the Academic Board.

Merit-roll of the naval cadets of the second class at the annual examination, June 1887.

Order of annual merit.	NAME.	Mechanical drawing.	International law.	Calculus and mechanics.	Sound, light and heat.	Electricity and magnetism.	Steam machinery, marine engines, and boilers.	Conduct.	Aggregate.
		16	16	36	28	28	72	12	928
1	William N. Vaneant	15.64	15.24	51.80	27.09	27.86	65.88	9.18	312.00
2	Frank Marble	15.32	14.16	51.52	24.71	26.88	62.64	9.48	304.71
3	Curtis B. Wilbur	11.20	14.48	46.76	28.88	26.11	62.46	11.34	196.23
4	Ashley H. Robertson	15.00	14.16	44.06	21.70	23.94	59.22	10.44	189.12
5	Casey B. Morgan	14.18	14.32	43.96	22.65	22.82	59.22	5.70	153.07
6	George N. Hayward	13.12	13.72	43.26	24.92	22.61	57.06	1.14	178.89
7	Carlo B. Brittain	11.68	14.32	41.86	21.56	21.21	55.80	9.12	175.55
8	Marcus L. Miller	12.76	13.48	41.72	21.94	21.21	54.72	9.42	175.29
9	Ernest K. West	12.56	12.32	40.32	21.42	22.12	54.00	9.78	173.43
10	Samuel S. Robinson	12.60	14.28	41.20	20.37	21.77	53.82	8.04	172.18
11	Henry K. Benham	11.24	12.60	42.28	23.94	21.84	51.06	8.58	172.14
12	Oscar W. Kneeter	11.24	12.72	42.96	19.11	18.76	58.32	7.44	171.57
13	William M. Crose	14.96	14.48	34.06	29.68	29.68	53.82	8.46	170.96
14	Delworth W. Beawick	12.88	13.92	38.06	19.32	21.77	52.38	10.38	169.71
15	John A. Lejeune	11.68	13.72	41.02	18.83	21.77	52.74	9.36	168.52
16	Armin Hartrath	10.80	15.00	42.84	21.21	24.15	53.64	9.42	168.06
17	Hiram B. Close	12.66	11.84	39.20	21.34	24.57	63.10	2.18	166.29
18	Lloyd H. Chandler	13.64	14.12	36.82	17.78	21.84	51.30	10.74	166.24
19	Charles F. Hughes	12.00	13.48	36.12	20.44	19.46	53.82	9.72	165.04
20	John F. Hubbard	11.52	13.96	39.90	23.10	22.12	50.94	2.52	164.06
21	James H. Reid	12.10	12.70	43.40	17.15	19.95	48.24	10.50	163.64
22	Albert L. Norton	13.80	14.32	36.26	17.60	19.25	50.94	10.86	162.93
23	Leroy A. Stafford	11.72	12.06	44.76	18.76	23.17	47.88	1.08	161.37
24	Samuel J. Aiken	11.04	13.92	39.48	17.71	19.81	48.78	9.78	160.52
25	Louis J. Anderson	11.56	13.12	40.04	18.09	19.04	48.68	7.86	158.99
26	William B. Franklin	12.52	13.24	35.28	18.48	18.99	48.06	11.22	158.70
27	Clarence L. A. Ingate	13.00	12.68	37.80	17.60	19.60	48.86	6.00	157.40
28	Edward L. Beach	11.52	12.92	37.94	17.71	18.65	46.62	9.84	156.10
29	Naart W. Cramer	14.72	12.96	35.06	17.50	18.99	44.62	8.94	155.63
30	Herbert G. Gates	12.08	14.00	35.70	17.04	19.95	46.80	9.18	154.79
31	Henry A. Wiley	10.84	13.20	36.90	18.41	18.76	47.34	7.56	153.07
32	Herman O. Stickney	13.56	11.80	36.26	16.66	18.41	46.62	8.54	152.85
33	Theodore P. Kane	11.92	11.80	37.10	16.45	18.99	47.86	5.16	149.21
34	Frederick B. Bennett, Jr.	11.18	11.92	36.96	16.06	17.99	45.72	7.14	147.67
35	Edwin R. Quinby	10.00	11.52	36.54	17.67	17.60	46.36	0.96	139.45
36	Robert C. Hall	10.80	11.68	40.46	19.53	17.99	44.10	1.44	146.00
37	William P. Baye	12.72	12.16	34.02	16.31	16.80	42.48	9.16	143.00
38	Morse D. Munroe	11.00	13.16	35.76	16.45	17.57	44.64	7.98	143.34

Merit-roll of the naval cadets of the third class at the annual examination, June, 1887.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the Constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Aggregate.
		Maxima	48	24	24	24	8	152
*1	Arthur B. Hoff	45.00	20.64	22.58	23.22	20.64	7.01	139.07
*2	George H. Beck	45.60	20.28	21.00	22.26	21.00	7.49	137.63
*3	Richmond P. Hobson	45.36	19.68	21.84	22.56	18.72	6.59	134.75
*4	Nathan C. Twining	42.96	20.46	22.20	22.62	19.56	5.28	133.18
*5	Benjamin F. Hutchison	43.92	20.04	21.60	22.98	17.64	6.50	132.68
6	George R. Marvell	44.88	16.74	17.70	16.38	23.46	7.55	126.71
7	Sumner E. Kittelle	35.76	17.82	21.90	20.64	22.14	6.94	125.30
8	William V. Pratt	41.52	18.06	20.82	21.66	19.68	3.23	124.97
9	Charles G. Long	38.04	17.22	19.38	21.84	20.16	7.23	123.87
10	Louis McC. Nulton	37.56	17.64	18.36	18.96	23.34	6.94	122.90
11	Lewis C. Lucas	37.56	16.92	20.16	19.26	21.48	5.31	120.69
12	George W. Danforth	36.72	19.56	20.22	18.06	18.90	6.50	120.05
13	William D. MacDougall	32.52	18.24	19.92	20.46	21.90	5.95	118.99
14	Bertram S. Neumann	35.40	17.76	18.24	16.80	21.90	6.73	116.85
15	Cleland N. Offley	35.76	17.52	17.40	18.18	19.92	6.72	115.50
16	Edward R. Lowndes	39.36	17.58	17.28	15.72	24.06	0.83	114.83
17	Louis A. Kaiser	38.52	16.50	18.30	17.88	18.18	4.45	113.83
18	William C. Cole	37.32	17.94	20.28	17.52	16.62	3.58	113.26
19	Thomas P. Magruder	36.84	18.12	19.20	18.72	18.48	1.73	113.09
20	John B. Patton	39.12	17.64	16.32	17.04	19.98	2.30	112.40
21	Warren J. Terhune	38.76	19.92	20.88	16.50	15.24	0.45	111.81
22	Cully F. Thomas	33.24	16.38	19.74	19.20	16.86	5.98	111.40
23	Ben H. Fuller	33.96	16.32	18.18	17.82	20.88	2.56	109.72
24	Louis R. de Steiguer	36.12	15.42	18.66	16.92	18.24	4.35	109.71
25	Thomas S. Webb	30.84	15.96	20.28	16.80	19.32	6.08	109.28
26	George G. Mitchell	33.96	16.20	15.72	17.94	19.98	5.41	109.21
27	Edward Gaines	35.28	15.96	18.00	16.68	17.64	5.38	108.94
28	George B. Bradshaw	37.68	16.60	18.06	18.18	16.14	2.05	108.91
29	George W. Kirk	33.48	15.84	18.90	16.50	18.90	5.25	108.87
30	George H. Mendell, jr	32.04	15.90	19.08	20.04	15.84	4.90	107.80
31	Charles A. Brand	33.96	15.42	18.24	18.30	18.48	3.33	107.73
32	Robert McM. Dutton	31.92	16.44	19.02	16.56	20.64	3.07	107.65
33	William W. Phelps	33.36	17.16	17.22	16.62	20.40	2.14	106.90
34	George L. Fermier	32.64	15.42	16.02	15.96	20.34	6.40	106.78
35	Philip Williams	35.76	17.58	18.84	17.94	15.66	0.64	106.42
36	Henry L. Woodward	31.44	15.90	21.18	17.22	15.30	3.55	104.59
37	Robert E. Carney	31.08	17.52	17.40	18.42	17.04	2.56	104.02
38	William H. Seymour	33.96	16.68	16.44	17.04	15.12	4.29	103.53
39	Frederick N. Lewis	31.56	15.06	17.76	17.58	15.78	4.42	102.16
40	Louis L. Driggs	30.12	15.78	19.44	16.50	17.88	2.95	101.77
41	Julius Prochaska	31.08	16.14	16.32	16.50	16.44	1.60	98.68
†	William K. Harrison	30.36	14.04	17.28	16.74	17.88	5.41	101.71
§	Vandyke Johns	28.44	14.94	18.30	16.74	16.68	6.59	

Merit-roll of the naval cadets of the third class, etc.—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the Constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Aggregate.
		45	34	34	34	34	8	153
6	Howard T. Woods	29.53	14.34	12.84	15.48	19.32	2.14	100.64
11	William W. Raymond	29.04	15.34	16.92	16.50	12.36	4.03	100.09
1	Ernest B. Anderson	30.12	14.52	16.03	15.96	15.36	5.18	97.76
6	Sidney S. Johnson	29.40	15.42	17.46	16.20	15.12	4.06	97.66
6	Wallace B. Montgomery	29.12	12.22	15.48	15.36	15.06	5.69	96.02
6	Charles F. Preston	29.52	14.04	15.06	15.48	16.92	5.34	96.26
6	Edison Emerson	28.06	12.20	16.92	15.84	17.70	2.84	95.56

Merit-roll of the naval cadets of the fourth class at the annual examination, June, 1887.

Order of annual merit.	NAME.	English and history.	Algebra and geometry.	French and Spanish.	Conduct.	Aggregate.
	Maxima	24	24	24	4	76
*1	Thomas F. Euhm	21.36	23.04	22.38	3.57	71.25
*2	Lawrence Spear	21.36	23.22	20.58	3.13	68.23
*3	Noah T. Coleman	20.82	22.86	19.98	2.59	66.25
*4	John V. Chase	18.18	26.16	21.24	3.59	66.17
*4	George W. Williams	19.08	23.46	21.24	1.39	66.17
*6	Cleland Davis	20.16	20.64	21.06	3.01	64.87
7	Frank H. Schofield	20.52	20.52	19.62	3.85	64.51
8	William H. Buck	20.70	19.62	20.34	3.63	64.29
9	Lawrence H. Moses	19.92	21.00	22.38	0.87	64.27
10	Henry J. Ziegemeier	18.30	19.92	20.88	3.96	63.06
11	Edward E. Lang	19.32	20.82	19.68	2.80	62.62
12	Charles T. Vogelgesang	20.04	18.18	20.64	3.53	62.39
13	Montgomery M. Taylor	19.50	18.96	21.36	2.44	62.26
14	Thomas C. Treadwell	19.20	19.80	19.92	2.96	61.88
15	Matt H. Signor	16.74	24.06	18.06	2.35	61.61
16	John M. Blankenship	19.80	18.18	19.92	3.83	61.78
17	Claude Bailey	17.58	19.80	20.94	3.35	61.67
18	Chester B. White	19.20	18.06	19.98	3.40	60.64
19	George F. Gibbs	17.88	16.38	22.92	3.44	60.62
20	Franklin S. Elsing	18.18	17.94	20.64	3.59	60.35
21	William A. Moffett	19.26	16.20	20.94	3.65	60.06
22	William A. Snow	19.20	16.74	19.38	3.87	59.19
23	Henry W. Rano	19.14	17.70	18.36	3.75	58.95
24	Alonso Gartley	18.84	20.16	16.62	3.08	58.70
25	Albertus W. Catlin	17.88	19.08	18.06	2.91	58.53
26	John H. Dayton	20.28	17.16	18.06	2.81	58.31
27	Charles B. McVay	16.68	18.66	19.26	3.69	58.29
28	Charles V. Buttler	19.44	17.82	17.70	3.11	58.07
29	Wendell C. Neville	17.04	18.24	19.38	3.35	58.01
30	John L. Soule	17.94	19.68	16.62	3.35	57.59
31	Lay H. Everhart	16.26	20.82	17.94	2.82	57.34
32	Henry S. Ritter	17.94	18.24	17.28	3.65	57.11
33	Claude B. Price	18.00	16.86	18.30	3.76	56.92
34	Frederick L. Eaton	18.42	17.70	18.84	1.88	56.84
35	Urban T. Holmes	18.18	17.82	18.48	2.35	56.83
36	John R. Edie	15.84	15.96	21.72	2.97	56.49
37	William T. Saunders	18.74	18.24	17.22	3.65	55.85
38	Lucius A. Bostwick	18.84	17.10	16.26	3.60	55.80
39	Franklin B. Sullivan	17.64	17.58	17.76	2.67	55.65
40	John P. J. Ryan	17.94	16.56	18.00	3.11	55.61
41	Eugene D. Ryan	16.14	15.84	19.98	3.60	55.56
42	William Y. Perry	17.40	15.36	19.38	3.15	55.29
43	Cyrus S. Radford	17.04	17.10	17.22	3.39	54.75
44	Doctor E. Dismukes	17.88	16.68	16.80	3.04	54.40
45	Frank H. Koehersperger	17.28	16.86	16.50	3.31	r
46	John W. Dinges	17.70	16.02	16.86	3.28	
47	Charles O. Bond	17.40	15.96	16.86	3.51	
48	Frank T. Okell	17.94	15.00	16.50	3.23	

Merit-roll of the naval cadets of the fourth class, etc.—Continued.

Order of annual merit.	NAME.	English and his-	Algebra and ge-	French and Span-	Conduct.	Aggregate.
		tory.	ometry.	ish.		
	Maxima	94	94	94	4	76
49	Julius L. Latimer	16.92	15.72	16.98	2.46	52.08
50	Frederick W. Ballachmider	17.34	15.42	15.78	2.19	51.73
51	Frank Holland	16.74	16.86	15.30	2.63	51.53
52	Erwin H. McDonald	16.62	15.30	16.80	2.90	51.32
53	Walter S. Norton	16.26	15.42	15.66	3.35	50.69
53	George C. Ward	16.20	16.26	16.86	1.27	50.59
55	Adrian L. Horne	15.66	15.42	15.66	2.93	49.67
	Ben Le F. Coulson	15.00	15.90	14.70	2.11	48.71
	Conrad Harness	15.78	13.62	15.72	2.31	48.53
(d)	Will W. Leonard	(a)	(a)	(a)	3.96	.....

d Turned back.

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *Naval Cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one Naval Cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.)

III. The course of Naval Cadets is six years.—(*Rev. Stat.*, § 1520.)

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the Naval Cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. *At least* ten appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for Naval Cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. *And all candidates must, at the time of their examination for admission, be between the ages of fourteen and eighteen years, and physically sound, well-formed, and of robust constitution.*"—(*Rev. Stat.*, § 1517.)

VII. Candidates who may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examinations.

No leave of absence will be granted to Cadets of the fourth class.

ADMISSION OF CANDIDATES.

EXAMINATION.

VIII. "*All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners.*"—(*Rev. Stat.*, § 1515.)

IX. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate; viz.,

Feeble constitution, inherited or acquired;

Retarded development;

Impaired general health;

Decided cachexia, diathesis, or predisposition;

Any disease, deformity, or result of injury that would impair efficiency; such as—

Weak or disordered intellect;

Cutaneous or communicable disease;

Unnatural curvature of spine, torticollis, or other deformity;

Inefficiency of either of the extremities or large articulations from any cause;

Epilepsy or other convulsions within five years;

Impaired vision, disease of the organs of vision, imperfect color sense;

Impaired hearing or disease of the ear;

Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;

Impediment of speech to such an extent as to impair efficiency in the performance of duty;

Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;

Hernia or undescended testis;

Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;

Disease of the genito-urinary organs;

Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the Academic Board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of a candidate.

GENERAL CHARACTER OF THE EXAMINATION.

READING AND WRITING—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write, from dictation, paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or compound, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon and the relation between the Troy and Avoirdupois pounds and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on Arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square and cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of Arithmetic as will enable them to apply the various principles to the solution of any complex problem which can be solved by the methods of Arithmetic; in other words, they must possess such a complete knowledge of Arithmetic as will enable them to proceed at once to the higher branches of Mathematics without further study of Arithmetic.

ALGEBRA.—The examination in *Algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English Grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of Orthography, Etymology, and Syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the uses of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; e. g.,

"*They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they ought.*" Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words, thus:

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected, thus:

1. *Describe the sources from which our knowledge of these events are derived.* 2. *I sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked t*

been there and seen it. 5. There's a sweet little cherubim sits up aloft to keep watch for the life of poor Jack!

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definition of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast-lines; the direction and position of important mountain-chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they empty; the position of important seas, bays, gulfs, and arms of the sea; the position of independent states, their boundaries and capital cities; the position and direction of great peninsulas and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and colonial possessions; locality of cities of historical, political, or commercial importance (attention is especially called to the rivers and bodies of water on which cities are situated); the course of a vessel in making a voyage between well known sea-ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other states, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, and of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with so much of the history of the United States as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the United States, and fix their position. When and by whom were these settlements made?
2. Explain the three forms of government in the colonies: royal, proprietary, and charter. Name the colonies that originally existed within the present limits of Massachusetts; of Connecticut. When were these colonies united? What did the colony of Pennsylvania include? When was it divided?
3. State the leading events of the colonial wars, and give the results of each war.
4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the United States, giving the names of commanding officers and stating the results of the battles.
5. Give an account of the formation and adoption of the Constitution.
6. Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as Naval Cadets, and become inmates of the Academy. Each Cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy), unless sooner discharged. The pay of a Naval Cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets immediately after their admission will supply themselves with the following articles; viz.,

One parade suit	\$31. 80	One pair gymnasium slippers	\$0. 85
One undress suit	21. 25	Three woolen shirts	5. 40
Two working suits	2. 10	*Six pairs of drawers	4. 50
One overcoat	23. 50	*Twelve white handkerchiefs	3. 00
One rubber coat	3. 15	*Eight towels	2. 00
One pair of rubber leggins . . . . .	. 80	Two pairs of drill gloves	1. 00
Two pairs of white duck leggins	1. 12	Three pairs of white thread gloves . . . . .	. 81
One rubber hat . . . . .	. 53	*One pair of suspenders . . . . .	. 36
One parade cap	2. 55	Two black silk neck-ties . . . . .	. 74
One undress cap . . . . .	. 67	Two clothes-bags . . . . .	. 50
*One whisk . . . . .	. 16	One hair mattress	5. 20
*One coarse comb . . . . .	. 12	One straw mattress	1. 32
*One fine comb . . . . .	. 30	Two pairs of high shoes	11. 50
One mug . . . . .	. 10	One pair of overshoes	1. 33
*One cake of soap . . . . .	. 10	*Eight white shirts	8. 00
One soap-box . . . . .	. 62	*Four night-shirts	2. 60
One requisition-book . . . . .	. 42	*Six undershirts	4. 50
One laundry-book . . . . .	. 34	Twelve linen collars	1. 50
*Twelve pairs of socks	3. 00	Eight pairs of cuffs	2. 00
One white cap	1. 50	Six pillow-cases	1. 50
*One hair-brush . . . . .	. 69	*One tooth-brush . . . . .	. 23
One hair pillow . . . . .	. 70	One looking-glass . . . . .	. 95
One pair of blankets	3. 75	One slop-jar	1. 25
Two bedspreads	2. 30	One broom . . . . .	. 27
Six sheets	3. 42	Two spatter-cloths	1. 00
One pass-book . . . . .	. 40	One jackknife . . . . .	. 53
One stencil, ink, and brush . . . . .	. 44	*Stationery . . . . .	. 38
One bottle of indelible ink . . . . .	. 18	*Thread and needles . . . . .	. 19
One rug	1. 20	*Shaving outfit	1. 25
Hammock clews . . . . .	. 40		
Bathing trunks . . . . .	. 25		
One wash-basin and pitcher . . . . .	. 85		
		Total	173. 47

The articles marked *, not being required to conform to a standard pattern, may be brought by the Cadet from home, but all other articles must conform to the regulations, and must, therefore, be supplied by the store-keeper.

Each Naval Cadet must, on admission, deposit with the Pay Officer the sum of \$20, for which he will be credited on the books of that officer, to be expended, by direction of the Superintendent, in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All the deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing	\$173. 47
Deposit for books, etc.	20. 00

Total deposit required	193. 47
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The value of clothing brought from home is to be deducted from this amount.

Each Naval Cadet, *one month after admission*, will be credited with the amount of his actual expenses in traveling from his home to the Academy.

XIV. A Naval Cadet who voluntarily resigns his appointment within a year of time of his admission to the Academy will be required to refund the amount paid for traveling expenses.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution.	Todhunter's Higher Algebra.
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenet's Geometry.
<i>English Studies History, and Law</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	2	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	2	4	FRENCH. The Robertsonian system; reading and translating "Le Conscrit;" conjugation of verbs.	Robertson's Whole French Language. Le Conscrit de 1812. Bellows's Pocket Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate co-efficients and the binomial theorem; permutations and combinations; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations.	Todhunter's Higher Algebra. Bowditch's Useful Tables.
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Chauvenet's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of letters and telegrams. Themes.	A. S. Hill's Rhetoric.
	3	4	HISTORY: Progress of colonial development in America, and the history of the United States; important points in the naval history of the United States by notes or lectures.	Elliot's History of the United States. Mitchell's Atlas.*
<i>Modern Languages.</i>	15½	4	FRENCH: Course of first term continued. Friday evenings and Saturday mornings devoted to exercises in dictation, and to practice in speaking French.	Robertson's Whole French Language. Le Conscriit de 1813. Bellows's Pocket Dictionary.*
	2	4	SPANISH: The Robertsonian system. [Given as an advanced course.]	Robertson's Spanish Course.
	2	4	GERMAN: Meisterschaft system. Reading and translating German writings. [Given as an advanced course.]	The Meisterschaft system. Otto-Joyne's Introductory Reader. Tauchnitz's Pocket Dictionary.*

* Saturday morning period.

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections; representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order.	Church's Descriptive Geometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigation of trigonometric formulas, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry; Todhunter's Trigonometry. Bowditch's Useful Tables.
<i>English Studies, History, and Law.</i>			ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seeley's English Lessons for English People; Abbott's How to Write Clearly. Ayres's Orthoëpist.* Ayres's Verballast.*
	3	1		
	2	3		
	2	1	HISTORY: Contemporary history, including the comparative study of governments, institutions, and political geography.	The School Herald. Martin's Statesman's Year Book. Mitchell's Atlas.*
	1	3		Andrews's Manual of the Constitution.
<i>Modern Languages.</i>	2	3	LAW: Constitution of the United States.	
	4	4	FRENCH: Reading and translating French comedy, written translations from English into French. Themes.	Bocher's Series of French Plays. Robertson's Whole French Language.* Bellows's Dictionary.* Robertson's Spanish Course.
	1	4	SPANISH: The Robertsonian system: nautical terms and phrases, and conversations thereon, reading and translating extracts from modern authors, writing original themes. (Given as an advanced course.)	Knapp's Spanish Readings.
	1	4	GERMAN: Continuation of fourth class course: nautical terms, writing original themes. (Given as an advanced course.)	Meisterschaft system. Otto-Joyner's Introductory Reader. Tauchnitz Pocket Dictionary.*
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: The use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; drawing exercises in descriptive geometry, including the projections of lines and planes, the construction of geometrical solids, and the projections and sections of surfaces and solids.	Tomlin's Machine Construction and Drawing.*

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	5	4	PHYSICS: Force and motion; gravitation and molecular attraction; hydrostatics; pneumatics. CHEMISTRY: Aim and scope of chemistry; the atmosphere; oxygen, nitrogen, water, and hydrogen; nitric and chlorhydric acids; acids, bases, and salts; the chlorine group; sulphur and phosphorus, and their compounds; Laws of Avogadro, Charles, and Mariotte; formulas; basicity; notation and nomenclature; arsenic, antimony, and bismuth; combustion; carbon and its compounds; boron and silicon; the alkali group; the calcium group; magnesium and zinc; the sesquioxide group; copper, mercury, and tin; gold and platinum; atomic weights. Practical work in the chemical laboratory. Lectures.	Daniel's Physics. Remsen's Organic and Inorganic Chemistry. Lecture notes.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Course for first term continued. Warped surfaces, and surfaces of revolution; development of single-curved surfaces; intersection of surfaces; tangent lines and planes; projections of the sphere; axonometric projections; shades and shadows.	Church's Descriptive Geometry.
	4	4	ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of co-ordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree; equations of the plane, of lines in space, and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.	C. Smith's Conic Sections; Aldie's Solid Geometry.
<i>Modern Languages.</i>	1	4	FRENCH: Oral recitations in French, upon the construction and theory of the language. Themes.	Sauveur's Grammaire Française pour les Anglais. Bellows's Dictionary.*
<i>Mechanical Drawing.</i>	†4	4	MECHANICAL DRAWING: Representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; perspective; drawing screws, bolts, nuts, gearing, and details of gun-carriages, machinery, and engines. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single curved surfaces, and problems on the surfaces of revolution.	Tomkin's Machine Construction and Drawing.*

† Saturday morning period.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
<i>Steam Engineering.</i>	4	4	MARINE ENGINES AND BOILERS: Explanation of all the parts of an engine; types of engines; steam valves and other valves; generation of steam; distribution and expansion of steam; screw propellers and side wheels; the indicator and its diagrams; the power of an engine and computations relating to it; hydrometers; saturation; scale and its prevention; casualties; boilers; materials; combustion; transfer of heat; testing steam-engines; the principles of mechanism.	Sennett's Marine Steam-Engine. Goodeve's Elements of Mechanism.
<i>Mechanics and Applied Mathematics.</i>	5	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves; centers of gravity; moments of inertia; planimeters; rules for the approximate determination of areas and volumes; differential equations.	Johnson's Integral Calculus, and Differential Equations.
<i>Physics and Chemistry.</i>	5	4	SOUND, LIGHT, AND HEAT: Properties of sound; atmospheric and other vibrations; properties of light; optical instruments; double refraction; polarization; temperature, and its measurement by thermometers; dilatation of solids, liquids, and gases; liquefaction and solidification; production of vapor and its condensation; effect of heat upon other properties of matter, radiant heat and its reflection and radiation; theory of exchange; conduction and convection; specific and latent heat; relation between heat and mechanical effect; thermodynamics. Lectures.	Daniel's Principles of Physics. Gannot's Physics. Balfour Stewart's Elementary Treatise on Heat.
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING. Practice in drawing ordnance; ordnance accessories, and the various kinds of implements and machinery used in the naval service.	Tomlin's Machine Construction and Drawing.

THIRD YEAR—SECOND CLASS.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
<i>Steam Engineering.</i>	12½	4	Course for first term continued.	
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.
<i>Physics and Chemistry.</i>	5	4	ELECTRICITY AND MAGNETISM: Frictional electricity; magnetism; electrostatics; electromagnetics; measurement of currents; heat, light, and work from electric currents; thermoelectricity; induction currents; electrochemistry; telegraphs and telephones; electrical machines; potential; electrometers; theory of absolute measurement; specific inductive capacity; measurement of resistances; practical lessons with batteries; practical work with electrical and dynamo-machines; measurement of resistances; galvanometers; determination of dip and intensity; use of magnetometer; lectures on metallurgy and explosives; laboratory work with explosives; testing oils and paints.	Thompson's Electricity and Magnetism. Kemp's Hand-Book of Electrical Testing. Day's Exercises in Electrical Measurement. Day's Electric Light Arithmetic. Kohlrausch's Physical Measurements.
<i>English Studies, History, and Law.</i>	2	4	INTERNATIONAL LAW: The rights and duties of States; the powers and duties of diplomatic envoys, consuls, and naval commanders; nationality, as to persons and as to vessels; jurisdiction over vessels at sea and in territorial waters; the relations of ships of war at sea and in foreign ports; fugitives and deserters; the laws of war; hostile measures falling short of war; privateers; the rights and duties of neutrals; enemy's property on land and at sea; the right of search; prizes; blockade; contraband; licenses to trade; recaptures; treaty of peace.	Glass's International Law.

|| Saturday-morning period.

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	4	4	<p>SEAMANSHIP: Fitting and rigging ships for sea; rope, blocks, and tackle; wire rope and metal fittings; purchasing weights; fitting and use of ground tackle; storage; handling vessels at wharves and docking; sails; working ship under sail and under steam; repairs to rigging, spars, rudder, and all fittings in emergencies; turning experiments; fitting and management of boats; duties of officers and crew; organization of crews; drills and evolutions; rules of the road; laws of storms; general instruction upon the management of vessels of various rigs and propellers.</p> <p>NAVAL CONSTRUCTION: Wooden ship building; ship-building in iron and steel, including the various systems of framing, keels, keelsons, stems, and ram bows; sterns, plating, deck-framing, bulkheads, rudders, miscellaneous fittings, and armor plating; torpedo boats and vessels of special construction; sheathing of ships; launching; docks and docking; displacement and buoyancy of ships and considerations of water-tight decks, bulkheads, and double bottoms; stability of ships and the use of diagrams of stability; rolling and pitching of ships; water chambers and bilge keels; structural strength and strains of ships; materials for ship-building; tests of steel; resistance of ships; steering of ships; the qualities and performance of ships in general.</p> <p>NAVAL TACTICS: Tactical units and nomenclature; manœuvring groups of ships, fleet manœuvres.</p> <p>SIGNALING: Army and Navy (English Morse) code; Navy code of flag signals, International code.</p>	<p>Lucas's Seamanship.</p> <p>Navy Department Pamphlets.</p> <p>Wilson's Ship Building.</p> <p>Reed's Ship Building.</p> <p>White's Manual of Naval Architecture.</p> <p>Navy and International Signal Books.</p>
<i>Ordnance and Gunnery.</i>	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat howitzers and machine-guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions.</p> <p>Hand-Book of Hutchins Rapid-Firing Gun.</p>

FOURTH YEAR—FIRST CLASS.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
<i>Ordnance and Gunnery.</i>			<p>INFANTRY TACTICS: School of the soldier; school of the company; school of the battalion; instruction for skirmishers.</p> <p>GUNNERY: The motion of projectiles in a non-resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Upton's <i>Tactics</i>.</p> <p><i>Text-Book of Ordnance and Gunnery</i> (Naval Academy Publication).</p> <p><i>Exterior Ballistics</i> (Naval Academy Publication).</p> <p><i>Ordnance Notes</i>.</p>
<i>Astronomy, Navigation, and Surveying.</i>	6	4	<p>THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; the use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets; different units of time; calendars; law of universal gravitation; precession; nutation; aberration; the moon; eclipses and occultations; tides; nebular hypothesis; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.</p> <p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the constructing and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p>	<p>White's <i>Astronomy</i>.</p> <p>Chauvenet's <i>Spherical and Practical Astronomy</i>.</p> <p>Bowditch's <i>Navigator</i>.</p> <p>American <i>Ephemeris and Nautical Almanac</i>.</p> <p>Coffin's <i>Navigation</i>.</p> <p>Notes on <i>Navigation and Meridian Distances</i>.</p>
<i>Mechanics and Applied Mathematics.</i>	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Merriman's <i>Method of Least Squares</i> .
	3	3	APPLIED MECHANICS: Elasticity; stress and strain; theory of structures; strength and deflection of beams; beams of uniform resistance.	Cotterill's <i>Applied Mechanics</i> .

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	5	4	Course of the first term continued.	
<i>Ordnance and Gunnery.</i>	15½	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors which arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas (of Noble and Abel) connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-Book of Ordnance and Gunnery (Naval Academy Publication).</p> <p>The Elastic Strength of Guns (Naval Academy Publication).</p> <p>Examples in Interior Ballistics.</p> <p>Bräger's Probability of Hitting an Object</p> <p>Harran on the Effects of Powder in Guns</p>

† Saturday period.

FOURTH YEAR—FIRST CLASS.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	5	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the derivation and transformation of the fundamental equations, the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, and of the values of the approximate and exact coefficients, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle, and the mechanical correction of the deviation and heeling errors. Navigation.</p> <p>SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; levelling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projection by development; Mercator's, Flamsteed's, and Bonne's projections; the polyconic projection of the United States Coast Survey; running surveys; portable transit instrument and zenith telescope. Astronomy.</p>	<p>Howell's Theory of the Deviations of the Compass.</p> <p>Evans's Elementary Manual for the Deviations of the Compass in Iron Ships.</p> <p>Chauvenet's Spherical and Practical Astronomy.</p> <p>Howell's Marine Surveying.</p> <p>Projection Tables.</p> <p>Bowditch's Navigator.</p>
<i>Physiology and Hygiene.</i>	*1	4	The nature of alcoholic drinks and narcotics; special instruction as to their effects upon the human system, in connection with the several divisions of the subjects of physiology and hygiene.	

* One period a week taken, in rotation, from the departments of Seamanship, Gunnery, and Navigation.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics	.	.	.	.	.	.	4	5
Ordnance and Gunnery	.	.	.	.	.	.	3	5½
Astronomy, Navigation, and Surveying	.	.	.	.	.	.	6	5
Steam Engineering	.	.	.	.	4	3½		
Mechanics and Applied Mathematics	.	.	.	.	5	5	3	
Physics and Chemistry	.	.	.	5	5	5		
Mathematics	5	5	5	5				
English Studies, History and Law	5	5	5	.	.	2		
Modern Languages	5	5½	4	1				
Mechanical Drawing	.	.	2	4½	2			
Physiology and Hygiene	.	.	.	.	.	.	.	1

NOTE.—The period given to Physiology and Hygiene is taken, in rotation, from the other departments.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Departments.	Fourth class.	Third class.	Second class.	First class.
Seamanship, Naval Construction, and Naval Tactics	.	.	.	M. T. Th. F. (3).
Ordnance and Gunnery	.	.	.	W. (3), Th. F. (3).
Astronomy, Navigation, and Surveying	.	.	.	M. T. W. Th. F. S. (1).
Steam Engineering	.	.	M. T. W. Th. (3)	.
Mechanics and Applied Mathematics	.	.	M. T. W. Th. F. (1)	.
Physics and Chemistry	.	.	M. T. W. Th. F. (2)	M. T. W. (2).
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)	.	.
English Studies, History, and Law	M. T. W. Th. F. (2)	M. T. W. Th. F. (3)	.	.
Modern Languages	M. T. W. Th. F. (3)	{ M. W. Th. S. (1), F. (7.30 to 9.30 p. m.),* }	F. (7.30 to 9.30 p. m.)*	.
Mechanical Drawing	.	T. F. (1)	F. (3), S. (1)	.
Physiology and Hygiene	.	.	.	.

SECOND TERM.

Seamanship, Naval Construction, and Naval Tactics	.	.	.	M. T. W. Th. F. (3).
Ordnance and Gunnery	.	.	.	M. T. W. Th. F. (2), S. (1).†
Astronomy, Navigation, and Surveying	.	.	F. (7.30 to 9.30 p. m.)*	M. T. W. Th. F. (1).
Steam Engineering	.	.	W. Th. F. (3), S. (1)†	F. (7.30 to 9.30 p. m.)*
Mechanics and Applied Mathematics	.	.	M. T. W. Th. F. (1)	.
Physics and Chemistry	.	{ M. T. W. Th. F. (1), F. (7.30 to 9.30 p. m.),* }	.	.
Mathematics	M. T. W. Th. F. (1)	M. T. W. F. (2), Th. (3)	.	.
English Studies, History, and Law	M. T. W. Th. F. (2)	.	M. T. (3)	.
Modern Languages	{ M. T. W. Th. F. (3), S. (1) } { F. (7.30 to 9.30 p. m.),* }	Th. (2)	.	.
Mechanical Drawing	.	M. T. W. F. (3), S. (1)†	.	.
Physiology and Hygiene	.	.	.	(See note, preceding page.)

* Lectures and practical instruction.

† Saturday period, second term, from January 31 to March 10.

TABLE OF COEFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class.	Maxima for four years.	Maxima for final graduation.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>						
Seamanship, Ship Building, and Naval Tactics	.	.	.	23	92	68
Cruise Reports, Journals, and Testimonials	.	.	.	.	.	12
<i>Ordnance and Gunnery.</i>						
Ordnance Instructions, Infantry Tactics, and Gunnery.	.	.	.	*19	76	48
Ordnance and Gunnery	.	.	.	.	.	.
<i>Astronomy, Navigation, and Surveying.</i>						
Astronomy, Surveying, Theory of Navigation, Practical Navigation, and Theory of Compass Deviation	.	.	.	19	76	48
<i>Steam Engineering.</i>						
Steam Machinery, Marine Engines, and Boilers	.	.	18	.	.	.
Practical Instruction in Steam	.	.	.	2	80	48
<i>Mechanics and Applied Mathematics.</i>						
Differential and Integral Calculus, and Mechanics	.	.	14	.	.	.
Least Squares and Strength of Materials	.	.	.	5	76	.
<i>Physics and Chemistry.</i>						
Chemistry	.	6	.	.	.	.
Sound, Light, and Heat	.	.	7	.	.	.
Electricity and Magnetism	.	.	7	.	80	.
<i>Mathematics.</i>						
Algebra and Geometry	6	.	.	.	.	.
Trigonometry, Analytical Geometry, and Descriptive Geometry	.	12	.	.	72	.
<i>English Studies, History, and Law.</i>						
English and History	6	.	.	.	.	.
English, History, and Law	.	6	.	.	.	.
International Law	.	.	4	.	64	.
<i>Modern Languages.</i>						
French, Spanish, and German	6	.	.	.	.	.
French, Spanish, and German	.	16	.	.	48	24
<i>Mechanical Drawing.</i>						
Mechanical Drawing	.	6	4	.	40	.
<i>Miscellaneous</i>						
Physiology and Hygiene	.	.	.	3	12	.
Conduct	1	2	3	5	44	.
Maxima for each class	76	152	238	364	768	240

*In making up the standing for a year, the second term is given double the weight of the first term.

†In making up the standing for the year, the first term is given double the weight of the second term.

‡In making up the standing for the year, the second term is given five times the weight of the first term.

Deductions for each demerit, 0.013, 0.032, 0.06, 0.133.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy codes; management of steam launches; steam fleet-tactics (with steam launches).

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal, with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; and from these observations finding the approximate and the exact coefficient and the horizontal and vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors (motive and turret).

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics . . . . .	.	.	.	.	.	.	4	5
Ordnance and Gunnery . . . . .	.	.	.	.	.	.	3	5½
Astronomy, Navigation, and Surveying . . . . .	.	.	.	.	.	.	6	5
Steam Engineering . . . . .	.	.	.	.	4	3½	.	.
Mechanics and Applied Mathematics . . . . .	.	.	.	.	5	5	3.	.
Physics and Chemistry . . . . .	.	.	.	5	5	5	.	.
Mathematics	6	5	5	5	.	.	.	.
English Studies, History and Law	5	5	5	.	.	2	.	.
Modern Languages	5	5½	4	1	.	.	.	.
Mechanical Drawing . . . . .	.	.	2	4½	2	.	.	.
Physiology and Hygiene . . . . .	.	.	.	.	.	.	.	1

NOTE.—The period given to Physiology and Hygiene is taken, in rotation, from the other departments.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy codes; management of steam launches; steam fleet-tactics (with steam launches).

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal, with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; and from these observations finding the approximate and the exact coefficient and the horizontal and vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors (motive and turret).

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Months.	Weeks.	First Division.	Second Division.	Third Division.	Fourth Division.
Oct	1	Company (4).	Battery (4).	Target great guns (4).	Steam tactics (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	2	Battery (4).	Company (4).	Steam tactics (4).	Target great guns (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Nov	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target great guns (4).	Steam tactics (4).	Company (4).	Battery (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Dec	2	Steam tactics (4).	Target great guns (4).	Battery (4).	Company (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Jan	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	1	Broad sword.	Steam.	Practical ordnance.	Steam.
	2	Steam.	Broad sword.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Broad sword.	Steam.
Feb	4				
	1	Steam.	Practical ordnance.	Steam.	Broad sword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
Mar	4	Practical ordnance.	Steam.	Small sword.	Steam.

SEMI-ANNUAL EXAMINATION.

Feb	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broad sword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broad sword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broad sword.	Steam.
Mar	1	Steam.	Seamanship.	Steam.	Broad sword.
	2	Deviat's compass (4).	Deviat's compass (4).	Deviat's compass (4).	Deviat's compass (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Apr	4	General quarters.	General quarters.	General quarters.	General quarters.
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
May	3	Skirmish (4).	Target great guns (4).	Torpedoes (4).	Steam tactics (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Steam tactics (4).	Torpedoes (4).	Target great guns (4).	Skirmish (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
Jun	1	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	2	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
Jul	3	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
		Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	4	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
		General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
Aug	5				
	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W	General quarters.	General quarters.	General quarters.	General quarters.
Sept	Th	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S	Seamanship.	Seamanship.	Seamanship.	Seamanship.

ANNUAL EXAMINATION.

June 1 to 10	Practice cruises.
June 10 to 20	
Aug 20 to 30	
Sept 1 to 10	
Sept 10 to 20	On leave.

SECOND CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Battery.	Pivot guns.	Steam launches.
	2	Battery.	Company.	Steam launches.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Nov.....	4	Pivot guns.	Steam launches.	Company.	Battery.
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
Jan.....	4				
	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.

SEMI-ANNUAL EXAMINATION.

Feb.....	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
Mar.....	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
Apr.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns(4).	Skirmish (4).	Steam tactics (4).	Target machine guns (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target great guns(4).	Target machine guns (4).	Steam tactics (4).
	1	Seamanship (1).	Seamanship(1).	Seamanship (1).	Seamanship (1).
	2	Steam tactics (4).	Target machine guns (4).	Target great guns(4).	Skirmish (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Target machine guns (4).	Steam tactics (4).	Skirmish (4).	Target great guns(4).
May.....	1	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	2	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	1	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	2	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
	3	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
(Fifth week.)	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.

ANNUAL EXAMINATION.

June 1 to 10 }

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Months.	Weeks.	First Division.	Second Division.	Third Division.	Fourth Division.
Oct	1	Company (4).	Battery (4).	Target great guns (4).	Steam tactics (4).
	2	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battery (4).	Company (4).	Steam tactics (4).	Target great guns (4).
	4	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Nov	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4).	Steam tactics (4).	Company (4).	Battery (4).
	3	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Dec	1	Steam.	Target great guns (4).	Battery (4).	Company (4).
	2	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Jan	1	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	2	Broad sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Broad sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Broad sword.	Steam.
Feb	1	Steam.	Practical ordnance.	Steam.	Broad sword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.

5

SEMI-ANNUAL EXAMINATION.

Feb	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broad sword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broad sword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broad sword.	Steam.
Mar	1	Steam.	Seamanship.	Steam.	Broad sword.
	2	Deviat'n compass (4).	Deviat'n compass (4).	Deviat'n compass (4).	Deviat'n compass (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Apr	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
May	1	Skirmish (4).	Target great guns (4).	Torpedoes (4).	Steam tactics (4).
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Steam tactics (4).	Torpedoes (4).	Target great guns (4).	Skirmish (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
June	1	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
July	1	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	2	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	3	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
	4	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
Aug	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	3	General quarters.	General quarters.	General quarters.	General quarters.
	4	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
Sept	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.

June 1 to 10 }

ANNUAL EXAMINATION.

June 10 to 20 } Practice cruises.
 Aug 20 to 30 }
 Sept 1 to 10 } On leave.

SECOND CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Battery.	Pivot guns.	Steam launches.
	2	Battery.	Company.	Steam launches.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Steam launches.	Company.	Battery.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
Jan.....	4				
	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
	5	SEMI-ANNUAL EXAMINATION.			
Feb.....	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
Mar.....	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Apr.....	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Target machine guns (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target great guns (4).	Target machine guns (4).	Steam tactics (4).
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	7	Steam tactics (4).	Target machine guns (4).	Target great guns (4).	Skirmish (4).
May.....	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Target machine guns (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	7	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
	9	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
(Fifth week.)	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10	ANNUAL EXAMINATION.				

SECOND CLASS.

Summer months.	Weeks	First division.	Second division.	Third division.	Fourth division.
	1	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Navy signals; Army signals p. m.	Machine-shop a. m. Target howitzers p. m.
	2	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Navy signals; Army signals p. m.
	3	Machine-shop a. m. Navy signals; Army signals p. m.	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.
	4	Running steam cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Navy signals; Army signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine-guns.
	5	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
	6	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.
	7	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.
	8	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.
	9	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.
	10	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
Sept.....	1	On leave.	On leave.	On leave.	On leave.
	2				
	3				
	4				

THIRD CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Battery.	Pivot guns.	Boats.
	2	Battery.	Company.	Boats.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Boats.	Company.	Battery.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
Jan.....	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Small sword.	Target small arms.
	5	SEMI-ANNUAL EXAMINATION.			
Feb....	1	Target small arms.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
Mar.....	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	5	General quarters.	General quarters.	General quarters.	General quarters.
Apr.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target small arms (4).	Skirmish (4).	Seamanship (4).	Boat (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target small arms (4).	Boats (4).	Seamanship.
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Skirmish (4).
	6	Seamanship.	Boats (4).	Target small arms (4).	Seamanship (1).
May.....	1	Boats (4).	Seamanship (1).	Seamanship (1).	General quarters (1).
	2	General quarters (1).	General quarters (1).	General quarters (1).	Target small arms (4).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Small sword (3).	Small sword (3).	Small sword (3).	Small sword (3).
	8	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
(Fifth week.)	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Boats.	Boats.	Boats.	Boats.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10.	ANNUAL EXAMINATION.				
June 10 to Aug. 28.	Practice cruise.				
Sept.....	On leave.				

FOURTH CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Battery.	Gymnastics.	Boats.
	2	Battery.	Company.	Boats.	Gymnastics.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Gymnastics.	Boats.	Company.	Battery.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Gymnastics.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
	4				
Jan.....	1	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.

5

SEMI-ANNUAL EXAMINATION.

Feb.....	1	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Dancing.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Dancing.
	4	Dancing.	Rigging loft.	Dancing.	Gymnastics.
Mar.....	1	Gymnastics.	Dancing.	Rigging loft.	Dancing.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
Apr.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Rigging loft (4).	Skirmish (4).	Seamanship (4).	Boats (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Rigging loft (4).	Boats (4).	Seamanship.
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship.
	6	Seamanship.	Boats (4).	Rigging loft (4).	Skirmish (4).
May.....	1	Boats (4).	Seamanship (4).	Skirmish (4).	Rigging loft (4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battalion artillery (2).	Battalion artillery (2).	Battalion artillery (2).	Battalion artillery (2).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
(Fifth week.)	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	General quarters.	General quarters.	General quarters.	General quarters.
	Th.	Boats.	Boats.	Boats.	Boats.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.

June 1 to 10.

June 10 to Aug. 20.

Sept....

ANNUAL EXAMINATION.

Practice cruises.

1	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
2	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
3	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
4	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
5	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
6	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.

*Swimming daily.

SUMMARY OF PRACTICAL INSTRUCTIONS.

Kind of instruction.	During the academic year.				Total num- ber of in- structions during academic year.	During summer months.				During month of Septem- ber, fourth class.	Total num- ber of in- structions, exclusive of practice cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
Seamanship, including stripping and rigging <i>Wyoming</i>											
Rigging loft	33	33	37	35	138	(*)	.	(*)	(*)	.	138
Boats under oars, or sail . . . . .	.	.	15	19	34	.	.	.	.	.	34
Naval tactics with steam launches	12	8	10	10	20	(*)	15	(*)	(*)	.	35
Navy signals, day . . . . .	.	5	.	.	20	(*)	5	.	.	.	25
Navy signals, night . . . . .	.	.	.	.	5	(*)	8	.	.	.	8
Army signals, day . . . . .	.	.	5	.	.	(*)	3	.	.	.	3
Army signals, night . . . . .	.	.	.	.	5	.	2	.	.	.	7
Monitor, with great gun practice	5	.	.	.	.	.	2	.	.	.	2
General quarters	6	6	6	6	24	(*)	.	(*)	(*)	.	24
General quarters, with target practice	4	4	4	4	16	(*)	.	(*)	(*)	.	16
Target practice, great guns	8	4	.	.	12	.	5	.	.	.	17
Pivot guns . . . . .	.	5	9	.	14	.	.	.	.	.	14
Broadside guns . . . . .	.	.	10	10	20	(*)	.	(*)	(*)	.	20
Mortars . . . . .	.	.	.	.	.	.	5	.	.	.	5
Torpedoes	4	.	.	.	4	.	.	.	.	.	4
Practical ordnance	10	5	.	.	15	.	.	.	.	.	15
Howitzers afloat . . . . .	.	.	.	.	.	.	5	.	.	.	5
Target practice, howitzers . . . . .	.	.	.	.	.	.	5	.	.	.	5
School of section . . . . .	.	.	.	.	.	.	.	.	10	.	10
School of battery	4	5	5	5	19	.	.	.	.	.	19
School of battalion artillery	8	8	8	8	32	.	.	.	.	.	32
Target practice, machine guns . . . . .	.	4	.	.	4	.	5	.	.	.	9
Target practice, small-arms . . . . .	.	.	9	.	9	.	.	.	.	.	9
Target practice, pistols . . . . .	.	.	5	.	5	.	.	.	.	.	5
Pool of the soldier . . . . .	.	.	.	.	.	.	.	.	24	.	24

SUMMARY OF PRACTICAL INSTRUCTIONS—Continued.

Kind of instruction	During the academic year.				Total number of instructions during academic year.	During summer months.				Total number of instructions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.	
School of the company	4	5	5	9	23	.	.	.	.	23
School of the battalion, infantry	10	11	11	11	43	.	.	.	.	43
Staircase drill	4	4	4	4	16	.	.	.	.	16
Band sword	10	9	.	.	19	.	.	.	.	19
Small sword	5	10	18	.	33	.	.	.	.	33
Practical instruction in direction of companies	4	.	.	.	4	(*)	.	.	.	4
Practical instruction, navigation	116	113	.	.	.	(*)	.	.	.	127
Practical instruction, surveying	110	.	.	.	.	.	.	.	.	110
Machinship and running ship engine	30 and 113	30	.	.	60	.	54	.	.	114 and 113
Running steam launches	.	5	.	.	5	.	6	.	.	11
Practical instruction in chemistry	.	.	113	.	.	.	.	.	.	113
Gymnastics	.	.	.	30	30	.	.	.	.	30
Swimming	.	.	.	.	.	.	.	.	.	24
Fencing	.	.	.	30	30	.	.	.	.	30

* Practice cruises.

† Steady periods.

The instructions in seamanship and gunnery on board of the *Wyoming*, *Pascic*, and *Resedick* are also made instructions in running and managing the engines and boilers of these vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

ANNUAL REGISTER
OF THE
UNITED STATES NAVAL ACADEMY.

ANNAPOLIS, MD.

THIRTY-NINTH ACADEMIC YEAR.

1888-'89.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1889.

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10, of that year, under the name of the Naval School, with Commander Franklin Buchanan as Superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first and the last were spent at the School, the intervening three being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the School, the students consisted of 36 Midshipmen, of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 Acting Midshipmen, appointed since September of the previous year. The Midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates, until the reorganization of the School, in 1850.

In September, 1849, a Board was appointed to revise the plan and regulations of the Naval School. The Board was composed of the following officers:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the Board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the School and the three intermediate years at sea. The School was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments, with executive heads, was fully adopted. It was provided that a Board of Visitors should make an annual inspection of the Academy, and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice-ship, and the annual practice-cruises were begun.

After the system had been in operation a year, new changes were proposed, and the recommendations of the Academic Board on the subject were referred to the Board of Examiners for the year 1851, composed of the following officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the Board of Examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea-service in the middle of the course, thus making the four years of study consecutive. The practice-cruise supplied the place of the omitted sea-service, and gave better op

tunities of training. The change went into operation in November, 1851, together with other improvements recommended by the Board. The system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining Acting Midshipmen were quartered in the Atlantic House and on board the frigates "Constitution" and "Santee." In the summer of 1865 the Academy was moved back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1869, all official connection with the Bureau came to an end.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of Acting Third-Assistant Engineers was ordered to the Academy for instruction. The course embraced the subjects of steam-engineering, mechanism, chemistry, and mechanics, and practical exercises with the steam-engine and in the machine-shop. This class was graduated in June, 1868, together with two Cadet-Engineers who had entered the Academy in 1867. After an interval of four years, in October, 1871, a new class of Cadet-Engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and in 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress, approved February 24, 1874, the course of instruction for Cadet-Engineers was made four years instead of two; and the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of Cadet-Midshipmen or Cadet-Engineers at the Naval Academy, but in lieu thereof Naval Cadets shall be appointed from each Congressional district and at large, as now provided by law for Cadet-Midshipmen, and all the undergraduates at the Naval Academy shall thereafter be designated and called 'Naval Cadets'; and, from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps: *And provided further,* That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year, such appointments to be made from the graduates of the year at the conclusion of their six years' course, in order of merit, as determined by the Academic Board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the Academic Board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year 1882. And if there be a surplus of graduates, those who did not receive such appointment shall be given a certificate of graduation, an honorable discharge, and one year's sea-pay, as now provided by law for Cadet-Midshipmen; and so much of section 1521 of the Revised Statutes as is inconsistent herewith is hereby repealed."

"That any Cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

SUPERINTENDENTS
OF THE
UNITED STATES NAVAL ACADEMY.

Assumed command :

- Sept. 3, 1845.**—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Upshur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.

BOARD OF VISITORS, JUNE, 1888.

Rear-Admiral C. R. P. RODGERS, U. S. Navy, *President.*

Hon. E. C. WALTHALL, U. S. Senate, *Vice-President.*

Hon. A. S. PADDOCK U. S. Senate.

Hon. WILLIAM MCADOO House of Representatives.

Hon. GEORGE D. WISE House of Representatives.

Hon. CHARLES A. BOUTELLE House of Representatives.

Hon. J. PROCTOR KNOTT Lebanon, Kentucky.

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Professor J. P. BLANTON President of State Normal College, Missouri.

Col. F. J. CRILLY Philadelphia, Pennsylvania.

Rev. JOHN HALL, D. D. New York City.

S. P. GILFITT, Esq. Evansville, Indiana.

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Assistants to the Commandant of Cadets,

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W. W. JOHNSON, A. M.

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W. G. SMITH.

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CAPTAIN J. M. T. YOUNG,

FIRST LIEUTENANT G. T. HATCO.

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THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.

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THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

THE HEAD OF THE DEPARTMENT OF PHYSIOLOGY AND HYGIENE.

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CADET-LIEUTENANT-COMMANDER.

R. P. HOBSON.

CADET-LIEUTENANTS.

G. H. ROCK,
A. B. HOFF,S. E. KITTELLE,
G. L. FERNIER.

CADET-MASTER AND ADJUTANT.

B. S. NEUMANN.

CADET-MASTERS.

N. C. TWINING,
B. F. HUTCHISON,G. R. MARVELL,
L. M. NULTON.

CADET-ENSIGNS.

W. V. PRATT,
L. C. LUCAS,J. B. PATTON,
J. PROCHAENKA.*Cadet-petty-officers of the first class.*G. C. LONG,
W. W. PHELPS,
R. E. CARNEY,
G. W. DANFORTH,W. D. MACDOUGALL,
C. A. BRAND,
E. B. ANDERSON,
G. G. MITCHELL,R. M. DUTTON,
W. C. COLE,
K. R. LOWNDEN,
T. P. MAGRUDER.*Cadet-petty-officers of the second class.*H. J. ZIEGEMEIER,
F. H. SCHOFIELD,
C. T. VOGELGESANG,
W. A. SNOW,C. B. McVAY,
N. T. COLEMAN,
W. A. MOFFETT,
L. SPEAR,C. DAVIS,
W. H. BECK,
J. M. BLANKENSHIP,
J. V. CHASE.

SUMMER CRUISE, 1888.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE-SHIP CONSTELLATION.

COMMANDER P. F. HARRINGTON, *Commanding*.
 LIEUTENANT-COMMANDER C. C. TODD, *Executive Officer*.
 LIEUTENANT G. P. COLVOCORESSES, *Navigator*.
 LIEUTENANT C. E. COLAHAN, *Watch Officer*.
 LIEUTENANT H. MCCREA, *Watch Officer*.
 LIEUTENANT H. H. HOSLEY, *Watch Officer*.
 LIEUTENANT B. M. DOYLE, *Watch Officer*.
 ENSIGN C. N. ATWATER, *Watch Officer*.
 ENSIGN W. C. P. MUIR, *Instructor in Navigation*.
 SURGEON M. H. SIMON.
 PASSED-ASSISTANT SURGEON A. C. H. RUSSELL.
 ASSISTANT PAYMASTER W. B. WILCOX.
 CAPTAIN K. K. RAWSON.

NAVAL CADETS

First Class.

Anderson,	Hutchison,	Nulton,
Bradschau,	Kaiser,	Offey,
Brand,	Kittelle,	Patton,
Carney,	Kirk,	Phelps,
Cole,	Long,	Pratt,
Danforth,	Lowndes,	Prochazka,
Driggs,	Lucas,	Rock,
Dutton,	Magruder,	de Steiguer,
Fernier,	Marvell,	Terhune,
Fuller,	MacDougall,	Twining,
Harrison,	Mitchell,	Williams, P.,
Holman,	Neumann,	Woodward,
Hoff,		

Third Class.

Allen, D. V.,	Hartung,	Reese,
Althouse,	Hough,	Richards,
Anthon,	Irwin,	Robinson,
Bock,	Kellogg, T. S.,	Robison, J. K.,
Belknap,	Kuenall,	Rosen,
Bierer,	Lane,	Russell, E. G.,
Blamer,	Laws,	Senn,
Bloom,	Leigh,	Shepard,
Brotherton,	Lyle,	Smith, H. E.,
Caldwell,	Macfarland,	Smith, H. G.,
Camden,	Magill,	Smith, L. G.,
Carter,	McGrann,	Sparkman,
Christy,	McKelvy,	Stearns,
Cousaul,	Maurin,	Sypher,
Cumrey,	Moule,	Theall,
Eurich,	Myers,	Trickle,
Evans, W.,	Ninde,	Watt,
Flowers,	Nire,	Wells,
Ford,	Pillot,	Willard,
Gillmor,	Pollock, E. T.,	Williams, D.,
Gross,	Reed,	Zahn.

Fourth Class.

Allen, C.,	Goodwin,	McBravey,
Archer,	Hines,	Murray,
Barnett,	Hooker,	Olmsted,
Beitwood,	Huntington,	Payne,
Chalbourne,	Hume,	Pollock, E. R.,
Colell,	Jones,	Powell,
Davis, A. R.,	Kaufman,	Russell, J. H.,
Davison,	Kilbourne,	Sawyer,
Day,	Lang,	Sayers,
Deane, B.,	Larkin,	Sheehan,
Dodge, W.,	Low,	Sparks,
Dugan,	Mallison,	Stopford,
Guth,	Mather,	Thompson,
Gray, W. D.,	McCormick,	Traut,

NAVAL CADETS ON BOARD THE UNITED STATES SHIP "SANTER," RETAINED AT THE ACADEMY
FOR MACHINE SHOP AND OTHER PRACTICAL INSTRUCTION

Second Class.

Allen,	Buch,	Davton,
Bradschau,	Catlin,	Dinges,
Brinkley,	Chase,	Dismuke,
Brown,	Coleman,	Faton,
Butler,	Davis, C.,	Edr,

Fourth Class—Continued.

Everhart,	Neville,	Signor,
Gartley,	Price,	Snow,
Gibbs, G. F.,	Radford,	Spear,
Holmes,	Rising,	Sullivan,
Kochersperger,	Ritter,	Taylor,
Latimer,	Ruhm,	Treadwell,
McDonald,	Ryan, E. D.,	Vogelgesang,
McVay,	Ryan, J. P. J.,	Williams, G. W.,
Moffett,	Saunders,	Ziegemeier.
Moses, L. H.,	Schofield,	

SUMMARY.

On board United States practice-ship <i>Constellation</i>	142
On board United States ship <i>Santee</i>	44
Total.....	186

*SYNOPSIS OF THE CRUISE.**CONSTELLATION.*

Commissioned June 1, 1888.

Cadets embarked June 9, 1888.

Sailed from Annapolis June 14, 1888.

Went to sea June 21, 1888.

Arrived in Gardiner's Bay June 23.

Cruised in Long Island Sound, between New London, Conn., Newport, R. I., and Gardiner's Bay until August 18.

Arrived in Hampton Roads August 23, and at Annapolis August 29.

Cadets disembarked August 29.

RELATIVE STANDING OF NAVAL CADETS AT THE ANNUAL EXAMINATION, JUNE, 1888.

P denotes physically disqualified for the naval service.

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

a denotes absence from examination.

Class of naval cadets appointed 1883, performing required service afloat.

Order of merit.	Name	State from which appointed.	Date of admission.
*1	Stockert, Robert	Minnesota	Sept. 4, 1883
*2	Hibbs, Frank Warren	Minnesota	Sept. 4, 1883
*3	Snow, Elliot	Utah Territory	Sept. 4, 1883
4	Decker, Benton Clark	Illinois	May 17, 1883
5	Bristol, Mark Lambert	New Jersey	May 19, 1883
6	Wells, Benjamin Warner, jr.	Illinois	May 17, 1883
7	McCully, Newton Alexander, jr.	South Carolina	May 19, 1883
8	Burke, Walter Safford	Illinois	May 17, 1883
9	Cloke, William Snelling	New Jersey	May 17, 1883
10	Stearns, Ben Wade	Iowa	May 17, 1883
11	Bertolette, Levi Calvin	Delaware	Sept. 4, 1883
12	Hurlbut, Samuel Ray	Connecticut	Sept. 4, 1883
13	Moale, Edward, jr.	Montana	June 17, 1882
14	Bryan, Henry Francis	Ohio	May 2, 1883
15	McMillan, William Graham	North Carolina	Sept. 4, 1883
16	Durell, Edward Hovey	Massachusetts	May 17, 1883
17	Logan, George Wood	Ohio	Sept. 3, 1883
18	Long, Andrew Theodore	North Carolina	May 17, 1883
19	Brown, Ford Hopkins	Iowa	May 17, 1883
20	Peckham, Henry Lincoln	Rhode Island	May 17, 1883
21	Washington, Thomas	North Carolina	May 17, 1883
22	Scales, Archibald Henderson	North Carolina	May 19, 1883
23	Stone, Clarence Morton	Indiana	Sept. 25, 1883
24	Churchill, Creighton	Missouri	Sept. 4, 1883
25	Davis, Archibald Hilliard	North Carolina	May 17, 1883
26	Johnston, Charles Ernest	Ohio	May 17, 1883
27	Draper, Herbert Lemuel	Kansas	Sept. 6, 1883
28	Boughter, Francis	Pennsylvania	May 17, 1883
29	Blue, Victor	South Carolina	Sept. 6, 1883
30	Pigott, Michael Royston	Massachusetts	Sept. 20, 1883
31	Edmonds, Samuel Preston	Missouri	May 19, 1883
32	Burrage, Guy Hamilton	Massachusetts	Sept. 6, 1883
33	Russell, Frank Mead	Pennsylvania	May 19, 1883
34	Allen, Henry Asa	Wisconsin	Sept. 4, 1883
35	Jackson, Richard Harrison	Alabama	June 4, 1883
36	Swanstrom, Frederick Emil	Minnesota	Sept. 6, 1883
37	Cochran, Claude Stanley	Ohio	Sept. 4, 1883
38	Hallinger, James Grey	Kansas	Sept. 6, 1883
39	Craig, Collin Samuel	Iowa	May 17, 1883
40	Hudson, Charles Edward	Arkansas	Sept. 4, 1883
41	Moseley, William Branch	Texas	Sept. 6, 1883
42	Yonng, Louis le Sausier	Louisiana	Sept. 6,
43	O'Halloran, Thomas Michael	Pennsylvania	May "

Class appointed in 1884, 35 members,

Order of general merit.

	Name.	State.	Date of admission.
1	Vannant, William Newton	Pennsylvania	Sept. 4, 1884
2	Marble, Frank	New York	Sept. 4, 1884
3	Wilbur, Curtis Dwight	Dakota	May 19, 1884
4	Robertson, Ashley Herman	Illinois	Sept. 4, 1884
5	Brittain, Carlo Bonaparte	Kentucky	May 19, 1884
6	Morgan, Casey Bruce	Mississippi	Sept. 4, 1884
7	Crowe, William Michael	Indiana	May 19, 1884
8	Miller, Marcus Lyon	Massachusetts	Sept. 4, 1884
9	Hayward, George North	New York	May 19, 1884
10	Koster, Oscar William	Pennsylvania	April 5, 1884
11	Beawick, Delworth Wilson	Michigan	May 20, 1884
12	Hubbard, John Flavel	New York	Sept. 5, 1884
13	Lejeune, John Archer	Louisiana	May 19, 1884
14	Roberts, Samuel Sherburn	Pennsylvania	Sept. 4, 1884
15	Chandler, Lloyd Horwitz	New Hampshire	Sept. 4, 1884
16	Hartnath, Arnon	Michigan	Sept. 4, 1884
17	Ingate, Clarence Louis Adrian	Alabama	May 20, 1884
18	Benham, Henry Kennedy	New York	May 19, 1884
19	West, Ernest Edward	Georgia	May 23, 1884
20	Hughes, Charles Frederic	Maine	Sept. 6, 1884
21	Norton, Albert Leland	Ohio	May 23, 1884
22	Stafford, Leroy Augustus	Louisiana	Sept. 15, 1884
23	Aiken, Samuel James	Tennessee	Sept. 4, 1884
24	Cole, Eli Kelley	New York	Sept. 4, 1884
25	Anderson, Louis Joseph	Georgia	May 27, 1884
26	Franklin, William Brell	Maryland	May 20, 1884
27	Roid, James Henry	Virginia	Sept. 4, 1884
28	Cramer, Stuart Warren	Illinois	Sept. 4, 1884
29	Stokely, Herman Osman	Kentucky	Sept. 4, 1884
30	Dembs, Edward Latimer	Minnesota	May 20, 1884
31	Bassett, Frederick Brewster, Jr	New York	May 19, 1884
32	Gabe, Herbert Greenville	Michigan	Sept. 4, 1884
33	Monroe, Moses Daniel	New York	May 19, 1884
34	Wiley, Henry Aristo	Texas	May 17, 1884
35	Kane, Theodore Porter	New York	May 19, 1884

performing required service afloat.

Age at date of admission.		Order of merit in—								Sea service in practice-ships.			
Years.	Months.	Astronomy, navigation, and surveying.	Method of least squares, and strength of materials.	Ordnance and gunnery.	Seamanship, ship-building, and naval tactics.	Practical seamanship.	Practical instruction in steam engineering.	Physiology and hygiene.	Conduct.	Number of demerits.	Months.	Days.	Order of general merit.
15	6	1	1	1	1	1	11	1	12	22	5	8	1
17	0	2	2	2	12	1	13	5	13	25	5	8	2
17	5	4	4	3	7	5	5	7	2	5	6	20	3
16	8	4	8	7	4	13	3	13	24	52	5	8	4
17	4	6	6	4	3	4	1	11	1	0	7	20	5
16	10	7	9	5	5	12	13	8	29	69	5	8	6
17	3	9	26	17	10	6	27	13	19	32	7	20	7
17	11	20	25	21	18	32	17	28	14	27	5	8	8
17	11	22	24	8	7	8	32	9	34	132	7	20	9
17	10	9	10	12	6	10	11	31	8	13	7	20	10
15	8	18	14	22	13	22	16	22	2	5	7	20	11
17	2	12	15	15	11	10	32	3	28	67	5	8	12
17	4	12	12	15	15	30	27	10	22	40	7	20	13
17	3	16	7	14	20	8	2	16	11	18	6	8	14
15	0	14	29	10	2	3	3	2	5	6	5	8	15
16	0	8	5	8	14	22	20	4	35	143	5	8	16
16	4	15	16	11	15	16	24	16	6	7	7	20	17
16	9	22	13	18	24	28	20	15	16	29	7	20	18
16	10	21	11	23	24	26	8	18	20	33	5	5	19
17	10	17	30	13	9	6	8	12	7	8	6	8	20
17	11	24	17	27	19	18	13	6	10	16	7	20	21
14	9	3	3	5	27	18	17	24	24	52	5	8	22
17	7	9	18	19	21	14	8	26	2	5	5	8	23
16	0	18	27	19	22	21	20	19	16	29	7	14	24
17	10	31	33	27	27	31	5	33	33	99	7	20	25
16	3	27	20	30	24	17	29	26	26	58	7	20	26
14	9	33	27	24	33	32	35	35	15	28	5	8	27
16	5	24	21	26	34	26	29	22	18	30	6	8	28
16	8	26	34	32	29	29	5	25	9	15	6	8	29
16	10	32	19	31	31	34	24	28	23	42	7	20	30
15	4	27	30	33	35	24	34	21	26	58	7	20	31
17	4	34	32	29	23	25	29	20	30	89	5	8	32
17	7	27	35	34	30	35	20	30	32	94	7	20	33
16	3	34	21	35	31	18	24	32	21	34	7	9	34
15	2	27	21	24	17	14	17	33	31	92	7	20	35

Order of merit

	Name.	State.	Date of admission.
34	Anderson, Ernest Bentley.....	Kentucky.....	May 22, 1885
13	Bradshaw, George Brown.....	Texas.....	Sept. 4, 1885
29	Brand, Charles Augustine.....	Connecticut.....	Sept. 8, 1885
27	Carney, Robert Ernest.....	Wisconsin.....	May 21, 1885
22	Cole, William Carey.....	Illinois.....	Sept. 5, 1885
7	Danforth, George Washington.....	Missouri.....	Sept. 7, 1885
1	Driggs, Louis Labadie.....	Nebraska.....	Sept. 28, 1885
32	Dutton, Robert McMillan.....	California.....	Sept. 4, 1885
31	Fernier, George Lucien.....	Indiana.....	May 21, 1885
26	Fuller, Ben Hebard.....	Michigan.....	May 22, 1885
30	Harrison, William Kelley.....	Texas.....	May 23, 1885
31	Hobson, Richmond Pearson.....	Alabama.....	May 21, 1885
3	Hoff, Arthur Bainbridge.....	At large.....	Sept. 28, 1885
6	Hutchinson, Benjamin Franklin.....	Missouri.....	Sept. 6, 1885
17	Kaler, Louis Anthony.....	Illinois.....	May 20, 1885
4	Kirk, George William.....	Missouri.....	Sept. 7, 1885
9	Kittelle, Sumner Ely.....	New York.....	May 19, 1885
20	Long, Charles Grant.....	Massachusetts.....	Sept. 7, 1885
15	Lowndes, Edward Rutledge.....	Michigan.....	Sept. 29, 1885
11	Lucas, Lewis Clarke.....	Ohio.....	Sept. 9, 1885
16	MacDougall, William Dugald.....	New York.....	May 19, 1885
28	Magruder, Thomas Pickett.....	Mississippi.....	Sept. 3, 1885
11	Marvell, George Ralph.....	Massachusetts.....	Sept. 7, 1885
24	Mitchell, George Grant.....	Indiana.....	Sept. 7, 1885
12	Neumann, Bertram Standbury.....	New Jersey.....	May 22, 1885
5	Nulton, Louis McCoy.....	Virginia.....	Sept. 8, 1885
21	Ostry, Cleland Nelson.....	Indiana.....	Sept. 6, 1885
10	Pattin, John Benson.....	South Carolina.....	May 21, 1885
25	Phelps, William Woodward.....	Maryland.....	May 19, 1885
8	Prest, William Venable.....	Maine.....	Sept. 9, 1885
3	Prehaska, Julius.....	Wisconsin.....	Sept. 7, 1885
2	Reck, George Henry.....	Michigan.....	May 20, 1885
18	de Steiguer, Louis Rudolph.....	Ohio.....	Mar 17, 1885
23	Torburne, Warren Jay.....	New Jersey.....	May 19, 1885
4	Twining, Nathan Crock.....	Wisconsin.....	Sept. 4, 1885
19	Wallace, Philip.....	Vermont.....	Sept. 4, 1885
1	Waltworth, Henry Lake.....	New York.....	May 19, 1885

36 members.

Age at date of admission.		Order of merit in—								Sea-service in practice-ships.		Order of merit.
Years.	Months.	Mechanical drawing.	International law.	Calculus and mechanics.	Sound, light, and heat.	Electricity and magnetism.	Steam machinery, marine engines, and boilers.	Conduct.	Number of demerits.	Months.	Days.	
16	8	37	34	32	25	34	34	14	55	8	0	34
15	4	35	28	5	14	9	11	31	120	5	7	13
17	4	29	23	24	29	28	34	21	75	5	7	29
16	5	17	21	28	20	19	20	35	140	7	9	27
17	1	26	10	15	18	17	24	30	118	5	7	22
17	7	9	13	12	5	7	7	14	55	5	7	7
17	1	25	16	36	37	36	33	37	180	3	23	†
15	10	20	16	30	36	32	30	28	102	5	7	32
17	2	9	37	33	32	34	34	10	41	7	7	31
15	3	9	25	17	29	19	25	36	176	7	7	28
14	10	32	30	34	32	19	28	12	45	8	0	30
14	9	20	4	1	2	2	1	17	57	8	0	*1
15	9	13	4	2	4	4	4	16	56	3	28	3
17	7	17	8	7	7	3	15	4	16	5	7	6
15	1	28	31	7	32	13	12	27	101	8	0	17
17	1	16	32	37	26	28	32	19	72	3	22	†
17	11	4	1	20	7	10	16	2	13	8	0	9
15	9	15	27	20	20	22	26	6	29	5	7	20
17	8	1	12	16	15	11	12	32	127	5	7	15
17	10	7	6	27	11	12	8	22	77	5	7	14
16	11	5	14	24	12	25	14	9	37	8	0	16
17	10	30	18	22	20	33	28	25	86	5	7	26
16	0	2	19	9	13	18	23	1	9	5	7	11
16	0	19	36	17	28	26	26	13	48	5	7	24
17	7	6	29	19	16	14	9	5	26	8	0	12
16	1	3	19	10	10	6	2	8	35	5	7	5
16	3	20	22	28	16	22	17	20	73	5	7	21
17	11	20	33	13	24	14	4	18	61	8	0	10
15	6	12	26	26	32	22	19	26	93	8	0	25
16	6	14	9	10	6	8	10	23	79	5	7	8
16	10	33	35	31	29	30	31	24	85	5	7	33
16	6	8	3	4	1	1	3	2	13	8	0	2
18	0	26	23	14	19	31	18	11	42	8	0	18
16	1	33	7	23	9	16	22	29	109	8	0	23
16	8	24	1	3	3	5	6	7	33	5	7	4
15	7	30	15	6	27	27	20	33	130	5	7	19
17	1	36	11	34	20	37	37	34	131	7	20	†

Order of annual merit.

	Name.	State.	Date of admission.
17	Bailey, Claude	Arkansas	Sept. 8, 1886
38	Balschmidt, Frederick William	Wisconsin	Sept. 4, 1886
11	Blankenship, John Millington	Virginia	May 20, 1886
29	Bond, Charles Otis	Iowa	Sept. 8, 1886
26	Bostwick, Lucius Allyn	Massachusetts	Sept. 7, 1886
9	Buck, William Henry	Mississippi	May 22, 1886
22	Catlin, Albertus Wright	Minnesota	May 24, 1886
5	Chase, John Valentine	Louisiana	Sept. 28, 1886
23	Coleman, Noah Tunnell	New York	May 21, 1886
6	Davis, Cleland	Kentucky	May 22, 1886
27	Dayton, John Havens	At large	Sept. 13, 1886
36	Dinges, John William	Pennsylvania	Sept. 7, 1886
34	Dismukes, Doctor Eugene	Mississippi	May 21, 1886
	Eaton, Frederick Lloyd	Michigan	Sept. 6, 1886
31	Edie, John Rufus	At large	May 19, 1886
12	Everhart, Lay Hampton	Alabama	May 20, 1886
18	Gartley, Alonzo	Iowa	May 23, 1886
	Gilbs, George Fort	District of Columbia	May 19, 1886
	Holland, Frank	Michigan	May 22, 1886
16	Holmes, Urian Tigner	Arkansas	Sept. 13, 1886
	Korbersperger, Frank Henry	Pennsylvania	May 20, 1886
28	Lattimer, Julius Lane	West Virginia	Sept. 20, 1886
37	McDonald, Erwin Huntington	New York	Sept. 7, 1886
14	McVay, Charles Butler	Colorado	May 19, 1886
21	Moffett, William Adger	South Carolina	Sept. 6, 1886
20	Moss, Lawrence Henry	New York	Sept. 29, 1886
32	Neville, Wendell Cushing	Virginia	Sept. 13, 1886
† 1	Norton, Walter Smith	New York	Sept. 7, 1886
25	Price, Claude Bernard	Mississippi	June 2, 1886
23	Radford, Cyrus Lugg	Kentucky	May 23, 1886
24	Rising, Franklin Sidney	Nevada	May 20, 1886
†	Ritter, Henry Snyder	Pennsylvania	May 23, 1886
21	Ruhn, Thomas Francis	Tennessee	May 20, 1886
27	Ryan, Eugene Dewey	New York	Sept. 4, 1886
†	Ryan, John Paul Joseph	New York	Sept. 6, 1886
25	Saunders, William Turner	At large	May 21, 1886
7	Scheld, Frank Harrison	New York	May 21, 1886
8	Shaver, Matt Howland	Nebraska	May 21, 1886
15	Shaw, William Alanson	Massachusetts	Sept. 4, 1886
†	Shole, John Estman	Illinois	Sept. 4, 1886
22	Spear, Lawrence	Ohio	May 19, 1886
20	Swittan, Franklin Buchanan	At large	May 22, 1886
19	Taylor, Montgomery Melis	At large	May 21, 1886
25	Treadwell, Thomas Conrad	Massachusetts	May 21, 1886
13	Vergunung, Charles Theodore	California	Sept. 6, 1886
†	Ward, George Crichton	New York	May 21, 1886
10	Williams, George Washington	South Carolina	Sept. 28, 1886
24	Wiegemeier, Henry Joseph	Ohio	May 21, 1886

43 numbers

[illegible]

Order of merit.	Name.	State.	Date of admission.
24	Allen, David Van Horn	Tennessee	Sept. 6, 1887
41	Althous, Adelbert	Illinois	May 21, 1887
27	Anthon, Archibald	New York	June 9, 1887
33	Beck, William Walker	Maryland	Sept. 6, 1887
* 4	Beknap, Reginald Rowan	Arkansas	Sept. 5, 1887
51	Bierer, Blon Barnett	Kansas	Sept. 24, 1887
19	Blamer, De Witt	Iowa	May 19, 1887
31	Blount, Irving	Indiana	Sept. 6, 1887
36	Brotherton, William Daniel	Wisconsin	Sept. 6, 1887
30	Caldwell, Harry Handly	Illinois	Sept. 7, 1887
26	Camden, Bernard Holt	West Virginia	Aug. 27, 1887
58	Carter, James Francis	Pennsylvania	Mar. 24, 1887
18	Christy, Harley Hannibal	Ohio	May 24, 1887
65	Connal, Charles Follett	Michigan	May 21, 1887
602	Embrey, Wiley Nims	Tennessee	Sept. 6, 1887
28	Emrich, Charles Rulf	Illinois	May 19, 1887
42	Evans, Walter	Kansas	Sept. 7, 1887
43	Flowers, Robert Lee	North Carolina	Sept. 7, 1887
32	Ford, William Howland	Iowa	Sept. 7, 1887
1	Gilchrist, Clarence Dyer	Indiana	Sept. 12, 1887
* 3	Gillmer, Horatio Gonzale	Wisconsin	Sept. 3, 1887
69	Grom, Louis Herman	Illinois	May 19, 1887
27	Hartung, Benwick John	Iowa	Sept. 6, 1887
11	Hough, Henry Hughes	Massachusetts	Sept. 6, 1887
40	Irwin, Noble Edward	Ohio	Sept. 29, 1887
56	Jenkins, Thomas Leoline	North Carolina	May 21, 1887
a	Jewell, Charles Theodore	At large	May 19, 1887
49	Kellerg, Thomas Steele	At large	May 21, 1887
12	Kuenrich, Henry Charles	Wisconsin	Sept. 6, 1887
1	Lancaster, William Lyurgue	Alabama	May 21, 1887
64	Lane, Rufus Herman	Ohio	June 2, 1887
29	Laws, George William	Iowa	May 21, 1887
66	Leigh, Richard Henry	Mississippi	Sept. 6, 1887
256	Leonard, Will Walker	Texas	Sept. 24, 1886
55	Lyle, Charles William	Virginia	Sept. 6, 1887
47	Macfarland, Horace Greeley	New York	Sept. 6, 1887
28	Macht, Louis John	Pennsylvania	June 17, 1887
23	McGrann, William Hugh	Tennessee	May 20, 1887
60	McKevy, William Nepler	Pennsylvania	May 20, 1887
* 6	McLomere, Albert Sidney	Tennessee	May 21, 1887
54	Martin, Timothy Francis	Louisiana	May 21, 1887
16	Male, John Gray Foster	California	Sept. 6, 1887
53	May Jr, John Twigg	Georgia	Sept. 27, 1887
9	Nimble, Daniel Benjamin	Indiana	May 20, 1887
23	Nire, Kazu Katsu	Empire of Japan	May 21, 1887
†	Phillips, John Stuart	Norwaha	Sept. 7, 1887
15	Pollock, Edwin Taylor	Ohio	May 20, 1887
17	Proctor, Charles Francis	Maryland	Sept. 6, 1887

71 members.

Age at date of admission.		Order of merit.				Number of demerits.	Sea-service in practice-ships.		Order of merit.
Years.	Months.	English and history.	Algebra and geometry.	French and Spanish.	Conduct.		Months.	Days.	
17	3	25	21	27	20	48	2	20	24
18	0	42	44	39	44	82	5	5	41
16	10	28	43	4	36	70	5	--	22
17	7	45	33	39	37	72	2	6	37
16	3	2	8	3	1	2	2	20	4*
17	6	54	42	60	27	56	1	2	51
15	4	25	7	29	62	117	5	06	19
17	6	28	29	41	32	58	2	20	31
15	11	34	38	36	22	50	2	20	36
14	7	14	58	29	30	57	2	20	30
18	0	58	39	61	59	108	1	2	56
18	0	28	27	33	19	47	5	5	28
16	8	16	9	25	37	72	5	5	18
16	8	43	47	34	60	109	3	21	45
17	6	63	60	52	70	152	1	2	662
16	8	16	24	24	60	133	4	21	26
17	10	52	31	49	11	24	2	20	42
16	10	50	47	29	34	66	2	10	43
15	7	47	49	20	6	19	2	20	32
17	6	48	70	68	7	20	--	--	‡
17	8	5	2	15	15	43	2	20	3*
16	2	57	59	48	71	166	4	21	59
17	0	32	15	43	16	41	2	20	27
16	8	22	25	2	4	18	2	20	11
18	0	61	22	57	27	56	2	6	48
17	10	52	53	54	65	128	2	15	56
15	3	a	a	a	64	123	2	15	a
15	9	39	60	42	58	107	5	5	49
16	4	4	22	8	33	60	2	20	12
17	2	58	67	67	45	84	2	15	‡
16	7	38	35	54	42	80	5	5	44
17	3	21	34	35	39	75	5	5	29
17	1	56	27	51	16	44	1	2	46
16	9	64	57	46	63	118	2	15	b 58
17	1	44	55	65	46	85	1	6	55
14	8	35	51	30	69	148	2	6	47
16	4	35	55	27	39	75	5	5	38
17	7	13	31	22	35	67	2	20	23
17	11	28	45	45	18	46	5	5	40
18	0	12	11	1	47	88	2	15	6*
16	9	48	60	61	50	92	1	2	54
16	8	16	19	14	9	22	2	15	16
16	8	50	54	54	49	90	2	20	53
16	10	11	13	12	56	98	5	5	9
17	8	70	12	69	30	57	5	5	52
16	10	55	67	23	27	56	2	6	†
16	7	16	16	16	23	51	2	6	15
16	4	33	9	9	20	48	2	17	13

Order of merit	Third Class—		
	Name.	State.	Date of admission.
25	Reed, Milton Eugene	Iowa	Sept. 8, 1887
61	Ruse, William James	Texas	Sept. 8, 1887
†	Richards, George	Ohio	Sept. 12, 1887
‡	Ridgely, Randolph	Georgia	Sept. 6, 1887
†	Robinson, Roby	Alabama	May 21, 1887
*1	Robison, John Keeler	Michigan	May 20, 1887
21	Rowen, John Howard	Pennsylvania	Sept. 27, 1887
34	Russell, Edward Gaston	Georgia	Sept. 7, 1887
35	Senn, Thomas Jones	South Carolina	May 19, 1887
17	Shepard, George Hugh	Wisconsin	Sept. 27, 1887
40	Smith, Harry Eaton	Ohio	May 20, 1887
*7	Smith, Henry Gerrish	Ohio	Sept. 5, 1887
10	Smith, Lucien Greathouse	Illinois	June 3, 1887
20	Sparkman, Sullivan Thomas	South Carolina	Sept. 24, 1887
*	Stearns, Clark Daniel	Michigan	Sept. 8, 1887
39	Spyher, Jay Hale	Arizona	Sept. 8, 1887
60	Theall, Elieha	New York	May 20, 1887
†	Trickle, Edward	Illinois	May 20, 1887
*5	Watt, Richard Morgan	Pennsylvania	Sept. 22, 1887
†	Wells, Chester	Pennsylvania	Sept. 10, 1887
14	Willard, Arthur Lee	Missouri	Sept. 7, 1887
33	Williams, Dion	Ohio	July 16, 1887
22	Zahn, Frank Baker	Pennsylvania	Sept. 8, 1887

* Resigned.

71 members—Continued.

Age at date of admission.		Order of merit.				Sea-service in practice-ships.			
Years.	Months.	English and history.	Algebra and Geometry.	French and Spanish.	Conduct.	Number of demerits.	Months.	Days.	Order of merit.
17	10	20	39	21	4	18	2	20	23
17	6	61	60	59	57	103	2	20	61
15	7	69	49	63	52	96	1	2	†
16	10	65	69	70	61	110	—	—	‡
16	0	65	65	63	68	139	5	5	†
16	6	3	1	5	48	89	5	5	1*
16	8	45	4	47	24	52	2	20	21
17	9	40	30	25	67	134	2	20	34
15	5	40	26	38	51	95	5	5	35
15	9	6	17	19	53	97	1	2	17
17	5	60	36	52	26	54	5	5	50
17	5	122	6	12	7	20	2	20	7*
17	6	7	20	7	13	37	5	5	10
17	9	9	46	11	12	34	2	20	20
17	8	15	14	9	2	8	2	20	8
16	6	55	37	43	42	80	2	20	39
14	5	68	51	58	53	97	5	5	60
17	7	65	66	50	24	52	5	5	†
15	3	16	3	16	3	11	2	20	5*
16	11	27	64	65	41	77	2	20	†
17	7	7	18	18	9	22	1	2	14
17	5	22	41	29	53	97	2	10	33
16	3	1	5	6	14	41	2	20	2*

Fourth class—89 members.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.		
			Years.	Months.	Months.	Days.	
Allen, Charles	Ohio	Mar. 15, 1888	17	11	2	29	
Arison, Edgar Emmett	Pennsylvania	May 18, 1888	15	2	2	20	
Baird, Lewis Conway	Indiana	Sept. 6, 1888	17	2			
Ball, Walter	New York	Sept. 6, 1888	16	1			
Bannon, Philip Michael	Maryland	May 21, 1888	16	2	2	20	
Beuret, John Dougal	Ohio	Sept. 7, 1888	17	7			
Bewley, Walter Portrum	Tennessee	Sept. 10, 1888	17	5			
Blakely, John Russell Young	Pennsylvania	Sept. 20, 1888	16	2			
Boltwood, Lucius	Kansas	April 4, 1888	17	11	2	20	
Borden, Thomas Sheppard	Louisiana	Sept. 25, 1888	16	6			
Breckinridge, Joseph Cabell	Kentucky	Sept. 5, 1888	16	6			
Campbell, Joseph Randolph		Sept. 29, 1888	16	6			
Chadbourne, Ralph Collins	Maine	May 21, 1888	17	2	2	20	
Childs, Albert Perrin	Pennsylvania	Sept. 6, 1888	17	4			
Churchill, Frederick Augustus	Missouri	Sept. 7, 1888	17	10			
Coleman, James Samuel	Alabama	Sept. 6, 1888	16	3			
Cruik, Robert Kyle	Texas	Sept. 6, 1888	15	8			
Curtett, John	Virginia	May 16, 1888	18	0	2	20	
Davis, Austin Rockwell	Georgia	May 21, 1888	16	9	2	20	
Dawson, Gregory Caldwell	Missouri	May 22, 1888	17	0	2	20	
Dawson, William Charles	Missouri	Sept. 6, 1888	17	5			
Day, George Calvin	Vermont	May 19, 1888	16	6	2	20	
Dannett, Stanley Pullen	Maine	May 19, 1888	15	11	2	20	
Douglas, Richard Spencer	Georgia	May 19, 1888	16	9	2	20	
Evans, Holden A.	Florida	Sept. 5, 1888	16	9			
Ferguson, Homer Lemur	North Carolina	May 21, 1888	15	2	2	20	
Gamble, Aaron Lichtenberger	Indiana	Sept. 5, 1888	15	10			
Garth, James Jefferson	Missouri	May 19, 1888	17	3	2	20	
Gibbs, Washington Dorsey	Mississippi	May 18, 1888	16	3	2	20	
Goodwin, Leonard	Pennsylvania	May 18, 1888	16	11	2	20	
Haack, Raymond De Laury	Idaho Territory	Sept. 25, 1888	17	2			
Hines, John Fore	Kentucky	May 21, 1888	17	7	2	20	
Hobbs, William Edward	Missouri	Sept. 6, 1888	17	1			
Hucker, James Clifton	Tennessee	June 18, 1888	16	10	2	10	
Huffington, Howard Williams	Pennsylvania	May 19, 1888	15	9	2	20	
Hunter, Charles Lincoln	New Hampshire	May 21, 1888	17	3	2	20	
Jennings, Joseph	Virginia	Sept. 7, 1888	16	7			
Jewell, Charles Theodore	At large	May 19, 1887	15	2	2	15	
Jones, Brian Ellwood	Penn., At large	May 19, 1888	17	4			
Kaufman, Charles Louis	New York	May 18, 1888	16	2	2	20	
Kellogg, Edward Stanley	New York	Sept. 5, 1888	17	11			
Killinger, Joseph George	Ohio	May 21, 1888	16	10	2	20	
Lang, John Young	Pennsylvania	June 1, 1888	17	2	2	20	
Larkin, Roger Bonaparte	Virginia	May 21, 1888	16	9	2	20	
Logan, William Vance	Indiana	Sept. 6, 1888	16	7			
Low, Theodore Henry	Connecticut	May 18, 1888	17	8	2	20	
Mackay, Charles Deane	New York	Sept. 25, 1888	17	5			
Mann, George	North Carolina	May 21, 1888	17	4	2	20	
Manton, Walter James	Louisiana	Sept. 21, 1888	15	9			
Mather, George Herbert	New Jersey	May 22, 1888	15	1	2	20	
McCrackin, Benjamin Leonard	New York	May 19, 1888	15	3	2	20	
McGee, Joseph Ezekiel	Illinois	Sept. 7, 1888	16	6			
McNair, Jack	Kansas	Sept. 6, 1888	17	5			
McNary, Herbert Elsworth	Washington Territory	May 18, 1888	16	7		20	
Merritt, Carl Edward	Georgia	Sept. 6, 1888	16	10			
Murray, William Lewis	New York	May 21, 1888	17	0	2	20	
Nichols, Rufus	Missouri	Sept. 6, 1888	17	4			

Fourth Class—89 members—Continued.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
Olmsted, Perry Napier	Oregon	May 21, 1888	16	10	2	20
Payne, Fred Rounsaville	New York	May 21, 1888	16	9	2	20
Pollard, jr., Charles Teed	Texas	Sept. 25, 1888	16	0		
Pollock, Emmett Riddle	Illinois	May 18, 1888	15	5	2	20
Porter, John Singleton	Tennessee	Sept. 25, 1888	15	8		
Powell, William Glasgow	New Jersey	May 18, 1888	16	8	2	20
Pringle, Joel Roberts Polnsett	Illinois	Sept. 6, 1888	15	7		
Randolph, William Browne	New York	Sept. 6, 1888	17	0		
Rice, Arthur	Indiana	Sept. 7, 1888	17	3		
Ridgely, Randolph	Georgia	Sept. 6, 1888	16	11		
Rodney, Warren	Texas	Sept. 6, 1888	17	1		
Russell, jr., John Henry	At large	May 18, 1888	16	6	2	20
Sawyer, Frederick Lewis	Illinois	Sept. 6, 1888	17	4		
Sawyer, Josiah Grigg	Illinois	May 19, 1888	16	11	2	20
Sayers, Robert *	Virginia	May 19, 1888	17	10	2	20
Scott, Guy Terrel	West Virginia	Sept. 5, 1888	14	6		
Shaw, Graham	Pennsylvania	Sept. 6, 1888	14	7		
Sheehan, James	New York	May 21, 1888	15	8	2	20
Sparks, William Wiley	Kentucky	May 22, 1888	16	5	2	20
Sterling, jr., Yates	Massachusetts	Sept. 6, 1888	16	4		
Stitt, Thomas Lutz	Indiana	Sept. 5, 1888	15	1		
Stopford, Frederick William	Massachusetts	May 19, 1888	15	7	2	20
Swigart, Raymond Belt	Iowa	Sept. 5, 1888	17	11		
Symington, Powers	West Virginia	Sept. 7, 1888	15	11		
Thompson, John Haynes	California	Sept. 27, 1888	14	10		
Thompson, Leon Seymour	Ohio	May 21, 1888	14	0	2	20
Trant, Frederick Augustus	Connecticut	May 19, 1888	16	11	2	20
Vail, Thomas Holdup Stevens	New Mexico	Sept. 25, 1888	17	9		
Valentine, William Stanley	New York	Sept. 6, 1888	16	2		
Wager, George Peter	Texas	Sept. 6, 1888	17	0		
Waldron, Hugh	New York	Sept. 29, 1888	17	2		
Wedekind, George	New York	Sept. 5, 1888	16	6		
Zillman, Christian Charles Herman	Missouri	Sept. 27, 1888	17	8		

* Resigned.

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

November 1, 1888.

First class	56 members
Second class	43 members.
Third class	65 members.
Fourth class	89 members.
Total	233

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

October 25, 1887, to October 25, 1888.

APPOINTED ENSIGNS, U. S. NAVY.

Naval Cadet George Breed, class of 1886.
 Naval Cadet William Hannum Grubb Bullard, class of 1886.
 Naval Cadet Webster Appleton Edgar, class of 1886.
 Naval Cadet Joseph Wallace Oman, class of 1886.
 Naval Cadet Philip Andrews, class of 1886.
 Naval Cadet William Harry Foust, class of 1886.
 Naval Cadet Harold Kemble Hines, class of 1886.
 Naval Cadet Willard Louis Dodd, class of 1886.
 Naval Cadet Harry Edgerton Rumsey, class of 1886.
 Naval Cadet Ryland Dillard Tisdale, class of 1886.
 Naval Cadet Samuel Melchoir Strite, class of 1886.
 Naval Cadet Friend William Jenkins, class of 1886.
 Naval Cadet George Franklin Cooper, class of 1886.

HONORABLY DISCHARGED.

Naval Cadet William Howell Caldwell, class of 1886.....	June 30, 1888
Naval Cadet Edwin Van Dusen Johnson, class of 1886.....	June 30, 1888
Naval Cadet Edward Taylor Witherapoon, class of 1886.....	June 30, 1888
Naval Cadet Francis Adelbert Lewis, class of 1886.....	June 30, 1888
Naval Cadet John Taylor McMillan, class of 1886.....	June 30, 1888
Naval Cadet Cornelius Canfield Billings, class of 1886.....	June 30, 1888
Naval Cadet John Giveen Berry, class of 1886.....	June 30, 1888
Naval Cadet Samuel Black Wiuram, class of 1886.....	June 30, 1888
Naval Cadet David May Young, class of 1886.....	June 30, 1888

AWAITING ACTION OF THE NAVY DEPARTMENT.

Naval Cadet Frederick Norton Kress, class of 1886.
 Naval Cadet George Frederick Hawk, class of 1886.

REBUNKED.

Naval Cadet Alexander Thompson, class of 1885.....	March 1, 1888
Naval Cadet John Noble Griawold, class of 1886.....	May 19, 1888
Naval Cadet Charles Allen, fourth class.....	Feb. 9, 1888

Naval Cadet Edgar Emmett Arison, fourth class.....	Feb. 7, 1888
Naval Cadet William Peter Baya, first class	Feb. 17, 1888
Naval Cadet Joseph Cabell Breckinridge, fourth class.....	Jan. 24, 1888
Naval Cadet Allen Merriam Cook, fourth class.....	Feb. 1, 1888
Naval Cadet Charles Stanhope Cotton, fourth class	Feb. 3, 1888
Naval Cadet John Curlett, fourth class.....	Feb. 1, 1888
Naval Cadet Austin Rockwell Davis, fourth class	Feb. 6, 1888
Naval Cadet Wiley Sims Embrey, third class	Oct. 9, 1888
Naval Cadet Edward Gaines, second class	Jan. 19, 1888
Naval Cadet George Fort Gibbs, third class.....	Oct. 17, 1888
Naval Cadet Clarence Dyer Gilchrist, fourth class.....	June 29, 1888
Naval Cadet Leonard Goodwin, fourth class	Feb. 9, 1888
Naval Cadet Frank Holland, third class	June 29, 1888
Naval Cadet Adrian Lorenzo Home, third class.....	Feb. 1, 1888
Naval Cadet Beriah Ellwood Jones, fourth class	Feb. 6, 1888
Naval Cadet Joseph Coolidge Kilbourne, fourth class	Feb. 6, 1888
Naval Cadet William Lycurgus Lancaster, fourth class.....	June 13, 1888
Naval Cadet Rozier Bonaparte Larkin, fourth class	Feb. 6, 1888
Naval Cadet Joseph Allen Leeds, fourth class.....	Feb. 4, 1888
Naval Cadet Will Walker Leonard, third class.....	June 29, 1888
Naval Cadet Frederick Nelson Lewis, second class.....	Feb. 3, 1888
Naval Cadet Robeson Lea Low, fourth class	Feb. 6, 1888
Naval Cadet Robert McKeage, fourth class.....	Feb. 6, 1888
Naval Cadet Herbert Ellsworth McReavy, fourth class	Feb. 1, 1888
Naval Cadet John Carey Malone, fourth class.....	Nov. 16, 1887
Naval Cadet George Henry Mendell, jr., second class.....	Jan. 24, 1888
Naval Cadet Clarence Sidney Merrill, fourth class.....	Nov. 28, 1887
Naval Cadet Charles Kemp Murphey, fourth class	Feb. 9, 1888
Naval Cadet Walter Smith Norton, third class	Oct. 13, 1888
Naval Cadet George William Nott, fourth class	Feb. 1, 1888
Naval Cadet Frank Theophilus Okell, third class	Feb. 1, 1888
Naval Cadet Letcher Owsley, fourth class.....	Jan. 24, 1888
Naval Cadet William Yulee Perry, third class.....	Dec. 28, 1887
Naval Cadet Edwin Rufus Quimby, second class	Feb. 15, 1888
Naval Cadet Henry Warren Raunos, third class.....	Nov. 18, 1887
Naval Cadet Randolph Ridgely, fourth class	June 6, 1888
Naval Cadet Maurice Sass, fourth class	Feb. 9, 1888
Naval Cadet Robert Sayers, fourth class	Oct. 17, 1888
Naval Cadet William Henry Seymour, second class.....	Jan. 28, 1888
Naval Cadet John Lutmar Soule, third class	June 13, 1888
Naval Cadet Van Dyke Todd, fourth class	Feb. 6, 1888
Naval Cadet Cully Fleming Thomas, second class	April 4, 1888
Naval Cadet George Creighton Ward, third class.....	June 13, 1888
Naval Cadet William Lewis Waller, fourth class	Feb. 6, 1888
Naval Cadet George Wedekind, fourth class.....	Feb. 6, 1888
Naval Cadet Van Wyck Weaver, fourth class	Nov. 25, 1887
Naval Cadet John Clinton Williams, fourth class	Feb. 1, 1888

DISMISSED.

Naval Cadet Charles Voorhees Butler, third class	Feb. 7, 1888
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DIED.

Naval Cadet John William Dinges, second class.....	Sept. 19, 1888
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MERIT-ROLLS FOR 1887-'88.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 63, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for conduct, is the final mark of the cadet for the year.

In the case of cadets who take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls."—(Regulations U. S. Naval Academy, § 150.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum, read "passed with distinction;" those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum read "passed."

Merit-roll of the graduating class of naval cadets at the conclusion of the six-years' course, June, 1888.

Order of merit.	Name.	Seamanship and naval tactics.	Ordnance and gunnery.	Steam engineering.	Navigation.	Modern languages.	Trice reports.	Aggregate for examination.	General aggregate for four years.	Final aggregate.	Assignment.
		56	44	44	44	28	24	240	760	1000	
P*1	KNEES, FREDERICK NOELTON	44.80	37.07	29.92	35.75	26.60	30.46	194.60	665.96	800.56	Not disposed of.
2	Breed, George	44.52	40.04	35.31	37.95	24.40	19.86	292.18	631.11	833.29	Ensign.
3	Bullard, William Hannum Grubb	41.30	38.06	27.72	30.58	19.18	17.34	174.18	620.68	794.86	Ensign.
4	Edgar, Webster Appleton	43.12	40.48	24.09	30.69	30.95	19.26	188.59	603.24	791.83	Ensign.
5	Oman, Joseph Wallace	44.24	37.40	32.56	30.80	20.65	20.64	186.29	601.50	787.79	Ensign.
6	Andrews, Phillip	45.22	39.49	28.27	33.88	21.14	21.00	189.60	585.34	774.94	Ensign.
7	Foust, William Harry	42.90	36.94	28.60	31.13	23.03	17.88	181.58	591.22	772.80	Ensign.
P 8	Caldwell, William Howell	39.76	36.62	33.00	33.11	22.33	22.20	186.92	582.54	769.46	Honorably discharged.
9	Hines, Harold Kemble	44.94	34.65	29.26	37.40	27.86	19.56	183.67	565.78	760.45	Ensign.
10	Dodd, Willard Louis	40.04	34.87	20.24	28.60	19.95	21.36	165.07	594.53	769.59	Ensign.
11	Rumsey, Harry Edgerton	46.76	37.62	29.81	37.84	23.45	19.02	194.50	563.75	758.25	Ensign.
12	Tisdale, Ryland Dillard	35.70	40.15	21.89	30.69	21.21	21.18	170.82	582.15	752.97	Ensign.
13	Strite, Samuel Melchior	36.82	38.72	24.53	28.48	19.11	20.40	168.06	579.21	748.27	Ensign.
14	Jenkins, Friend William	30.80	37.40	32.23	33.77	22.96	16.14	173.30	574.78	748.08	Ensign.
15	Cooper, George Franklin	42.14	34.65	21.46	27.50	25.69	20.70	172.13	564.68	736.81	Ensign.
16	Hawk, George Frederick	38.78	34.21	30.69	33.99	21.84	22.62	182.13	554.98	736.21	Not disposed of.
17	Johnson, Edwin Van Deusen	44.94	35.75	23.21	28.49	18.34	20.58	171.31	556.71	728.02	Honorably discharged.
18	Witherspoon, Edward Taylor	35.28	36.63	29.90	28.82	21.70	20.76	164.09	562.27	727.36	Honorably discharged.
19	Levin, Francis Adelbert	35.00	31.35	24.09	27.69	18.76	20.46	157.27	567.07	724.34	Honorably discharged.
20	McMillan, John Taylor	42.00	33.00	25.08	33.01	21.56	20.70	174.35	540.51	714.86	Honorably discharged.
P 21	Billings, Cornelius Canfield	37.62	34.21	22.66	27.94	18.48	21.48	162.29	537.01	689.30	Honorably discharged.
22	Berry, John Givens	42.00	28.83	25.74	27.61	20.44	19.62	164.34	522.65	687.19	Honorably discharged.
23	Wiram, Samuel Black	37.24	33.11	23.10	26.73	18.90	19.68	158.76	525.58	684.34	Honorably discharged.
24	Young, David May	36.68	32.01	20.13	26.18	22.64	19.62	157.16	515.68	672.84	Honorably discharged.

Merit-roll of the naval cadets of the first class.—Annual examination, June, 1888.

Order of merit	Name	Aggregate for										Total			
		Artillery, coast and engineering.	Land and engineering.	Ordnance and gunnery.	Naval architecture and naval law.	Practical engineering.	French literature.	French literature in French.	Physiology and hygiene.	Conduct.	Aggregate for fourth year.	Aggregate for third year.	Aggregate for second year.	Aggregate for first year.	General aggregate for four years.
		76	80	76	78	80	8	18	20	20	304	338	183	76	760
91	William N. Vincent	69.16	19.15	73.15	65.86	17.55	0.20	11.16	17.07	279.72	212.60	130.29	65.25	695.96	
92	Frank Marble	62.65	14.30	67.83	54.72	15.65	6.16	9.60	16.07	254.58	204.71	141.03	69.95	670.27	
93	Charles D. Wilbur	59.66	16.30	65.56	57.08	17.10	6.44	9.72	19.33	251.76	190.23	124.70	61.37	628.06	
94	Abby H. Roberts	70.66	16.15	63.08	59.40	16.20	6.72	8.91	13.07	242.96	189.12	129.48	61.33	622.92	
95	Charles H. Brittain	58.90	16.65	65.17	52.94	17.00	6.98	9.68	20.19	253.90	175.55	118.97	60.96	609.36	
96	Charles H. Morgan	57.55	16.65	64.62	46.86	16.25	6.16	9.64	10.90	236.75	183.07	124.23	62.84	604.80	
97	William M. Felt	56.44	14.85	58.71	47.62	17.05	5.88	8.91	17.73	211.50	170.96	126.85	62.59	592.90	
98	Marquette Wheeler	54.74	13.90	56.28	52.76	16.65	6.04	7.95	16.40	222.06	176.29	126.59	66.62	589.80	
99	George S. Hayward	53.39	14.05	61.75	57.00	16.85	5.68	9.31	2.40	220.69	175.83	127.08	65.60	589.80	
100	Samuel W. B. Foster	56.24	15.75	60.41	57.00	16.80	6.20	7.86	18.27	220.31	171.57	116.97	61.25	580.10	
101	Leifur W. Beck	54.72	15.25	56.05	54.54	15.50	6.12	8.13	19.33	229.64	169.71	123.14	63.97	586.46	
102	John F. Hubbard	55.67	16.20	69.00	55.06	16.80	5.68	10.36	11.07	220.15	164.06	126.87	65.25	585.33	
103	John A. Lettice	53.67	15.45	59.06	53.64	14.80	5.88	9.42	14.07	226.62	168.52	120.54	60.17	583.46	
104	Samuel W. Beck	56.24	16.20	59.85	52.02	16.85	6.40	8.56	17.60	222.77	173.16	119.17	57.92	582.04	
105	Edwin H. Chandler	55.48	15.70	61.25	62.95	17.40	6.32	10.92	10.20	248.54	164.24	101.80	55.97	580.58	
106	Arthur Harbath	56.41	16.75	61.75	54.36	15.20	5.86	9.99	6.93	222.65	169.06	122.18	62.07	577.36	
107	Charles L. A. Bucke	55.29	15.00	61.37	52.64	15.95	6.92	8.55	16.07	234.70	167.40	120.46	62.44	576.00	
108	Henry K. Bonham	54.20	14.00	57.00	50.22	14.95	5.86	8.67	16.13	221.72	172.14	118.40	61.15	573.41	
109	Edward F. Wood	53.56	15.50	55.07	50.22	15.00	6.46	8.40	13.00	220.33	173.42	117.74	55.04	566.57	
110	Charles Hughes	54.91	14.65	60.04	55.80	17.05	6.46	9.03	16.93	225.77	165.04	112.37	62.76	565.94	
111	Albert L. Norton	51.00	14.90	54.34	52.20	15.65	6.16	9.84	17.87	222.46	162.83	115.62	59.87	560.87	
112	Levi A. Anfield	61.94	16.45	62.65	60.14	16.65	6.04	8.10	13.07	234.54	161.57	100.71	57.21	609.83	
113	Samuel J. Shack	56.24	14.85	56.43	61.48	16.00	6.36	7.98	19.33	229.67	169.62	111.04	55.15	602.83	
114	Edw. A. Cole	54.72	14.80	56.43	50.54	15.00	5.86	8.34	10.13	221.92	153.96	113.69	57.14	606.91	
115	Levi J. Anderson	50.71	13.10	54.14	60.14	14.75	6.41	7.77	6.80	293.07	160.90	117.83	50.34	630.93	
116	William B. Franklin	51.11	14.05	53.96	50.22	15.70	5.76	7.06	13.27	211.65	156.70	107.60	56.06	634.05	

27	James H. Reid	49.78	13.80	54.72	46.62	14.65	5.52	7.65	16.27	209.01	183.64	105.26	55.33	538.24
28	Stuart W. Cranner	51.49	14.10	54.53	45.90	15.00	5.76	8.13	10.00	210.91	155.62	111.09	55.17	532.79
29	Herman O. Stickney	51.30	13.05	51.30	48.42	14.90	6.44	8.01	18.00	211.42	162.85	112.01	55.72	532.00
30	Edward L. Beach	50.35	14.75	51.49	46.98	14.35	5.92	7.95	14.40	206.19	156.10	105.53	57.21	525.03
31	Frederick B. Bassett, Jr.	51.11	13.65	50.54	45.18	15.30	5.90	8.25	12.27	201.90	147.67	113.63	56.08	519.28
32	Hertert G. Gates	49.21	13.15	54.15	50.40	15.05	5.76	8.31	8.13	204.16	154.79	102.32	56.37	517.64
33	Moses D. Monroe	51.11	12.95	50.53	47.70	14.15	5.96	7.92	7.47	197.61	143.34	108.24	61.56	510.75
34	Henry A. Wiley	49.21	14.10	49.97	46.98	15.65	5.92	7.83	15.47	205.13	153.07	100.53	51.29	510.02
35	Theodore P. Kane	51.11	14.10	54.72	53.10	16.00	6.04	7.77	7.73	210.57	149.21	97.94	51.39	509.11

* Completed four years' course "with distinction."

b Completed four years' course "with credit."

Merit-roll of naval cadets, second class, 37 members, at the annual examination, June, 1888.

Order of annual merit.	NAME.	Mechanical drawing.	International law.	Calculus and mechanics.	Sound, light, and heat.	Electricity and magnetism.	Steam machinery, marine engines, and boilers.	Conduct.	Aggregate.
		Maxima.	16	16	56	32	32	72	12	328
01	Richmond P. Hobson.....	12.00	13.84	32.08	23.17	24.64	61.92	8.58	190.23
2	George H. Rock.....	12.96	14.00	47.46	23.73	24.71	58.68	11.22	192.76
3	Arthur B. Hoff.....	12.80	13.84	48.86	21.77	23.69	68.14	8.64	187.64
4	Nathan C. Twining.....	11.96	14.60	47.88	21.91	23.10	57.42	10.02	186.89
5	Louis McC. Sulton.....	14.68	12.62	43.54	20.09	22.12	58.86	9.90	181.71
6	Benjamin F. Hutchison.....	12.12	13.52	44.04	20.65	23.66	52.74	11.04	178.67
7	George W. Danforth.....	12.92	12.96	43.26	21.21	22.63	56.16	8.70	176.84
8	William V. Pratt.....	12.72	13.44	43.54	20.70	21.14	54.54	7.29	173.43
9	Sumner E. Kittelle.....	14.44	14.60	39.20	20.65	20.58	52.38	11.22	173.07
10	John B. Patton.....	12.00	11.40	42.56	18.13	19.74	58.14	8.34	170.31
11	George R. Marvell.....	14.76	12.62	44.80	19.46	19.25	47.88	11.46	170.13
12	Bertram B. Neumann.....	13.72	11.92	39.48	18.76	19.74	54.00	10.80	169.32
13	George B. Bradshaw.....	10.30	12.00	45.64	19.11	20.70	54.18	4.80	166.88
14	Louis C. Lucas.....	13.36	13.68	36.96	19.60	19.88	55.98	7.38	164.84
15	Edward R. Lowndes.....	14.88	13.00	41.50	18.90	20.37	54.00	4.38	164.81
16	William D. MacDougall.....	13.84	12.88	37.94	19.63	18.90	53.64	9.78	160.51
17	Louis A. Kaiser.....	11.76	11.72	44.94	17.80	19.81	54.00	5.94	165.67
18	Louis E. de Stignuer.....	11.80	12.40	42.28	18.41	18.27	50.40	9.48	163.04
19	Philip Williams.....	11.64	12.68	45.36	17.71	18.76	49.50	4.20	159.85
20	Charles G. Long.....	12.60	12.04	39.20	18.29	19.11	46.80	10.26	158.21
21	Cleland N. Offey.....	12.00	12.44	36.82	18.76	19.11	50.76	7.62	157.51
22	William C. Cole.....	11.80	13.20	41.86	18.62	19.46	47.34	4.92	157.20
23	Warren J. Terhune.....	10.80	13.60	38.36	20.58	19.60	48.42	5.46	156.82
24	George G. Mitchell.....	12.04	10.80	40.88	17.64	18.83	46.80	9.12	156.11
25	William W. Phelps.....	12.88	12.20	37.38	17.60	19.11	49.86	6.42	155.45
26	Thomas P. Magruder.....	11.64	12.00	38.50	18.20	18.06	46.62	6.84	152.66
27	Robert E. Carey.....	12.12	12.48	36.82	18.20	19.18	49.50	5.60	151.90
28	Ben H. Fuller.....	12.92	12.24	40.88	17.57	19.18	46.98	1.44	151.21
29	Charles A. Brand.....	11.68	12.40	37.94	17.57	18.62	45.00	7.50	150.71
30	William K. Harrison.....	11.20	11.88	35.00	17.60	19.18	46.62	9.30	150.68
31	George L. Fennel.....	12.92	10.36	37.70	17.50	17.92	45.00	9.54	148.84
32	Robert M. W. Button.....	12.00	12.64	36.68	17.15	18.13	46.44	5.88	148.62
33	Julius Prochaska.....	10.80	10.84	36.54	17.57	18.48	46.08	6.80	147.21
34	Kenneth B. Anderson.....	10.68	11.00	35.84	17.85	17.92	45.00	8.70	146.19
†	George W. Kirk.....	12.24	11.64	35.32	17.78	18.62	45.54	7.68	146.82
†	Henry L. Woodward.....	10.24	13.04	35.00	18.20	17.91	43.74	4.14	141.77
†	Louis L. Briggs.....	11.84	12.64	34.92	16.31	17.64	45.36	1.20	140.01

Merit-roll of naval cadets, third class, 48 members, at the annual examination, June, 1888.

Order of annual merit.	NAME.	Trigonometry analytical geometry, and descriptive geometry.	Chemistry.	English, history, and the constitution.	French and Spanish.	Mechanical drawing.	Conduct.	Aggregate.
	Maxima.....	48	24	24	24	24	8	152
*1	Thomas F. Ruhn.....	48.08	21.48	21.78	21.90	21.06	5.60	137.90
*2	Lawrence Spear.....	44.04	20.10	21.12	20.58	20.76	5.63	132.23
*3	Noah T. Coleman.....	44.76	20.52	21.30	19.50	22.26	2.88	131.22
*4	Henry J. Ziegemeier.....	44.28	18.48	20.94	20.88	19.32	7.07	130.97
5	John V. Chase.....	42.36	19.38	18.78	20.46	21.12	4.13	126.23
6	Cleland Davis.....	40.68	19.50	19.98	20.22	22.14	4.19	126.11
7	Frank H. Schofield.....	37.80	20.28	21.00	19.14	20.88	6.53	125.63
8	Matt. H. Signor.....	44.28	19.86	18.18	19.44	19.56	0.64	121.06
9	William H. Buck.....	37.92	18.36	20.94	18.60	19.80	5.47	121.09
10	George W. Williams.....	42.36	19.38	19.92	18.72	18.78	1.02	120.18
11	John M. Blankenship.....	35.28	16.92	19.38	17.58	22.08	6.85	118.09
12	Alonso Gartley.....	38.64	17.16	18.96	16.68	23.22	3.14	117.80
13	Charles T. Vogelgesang.....	34.10	17.94	19.74	21.60	16.80	7.14	117.42
14	Charles B. McVay.....	38.52	16.44	18.20	19.38	18.18	6.21	117.38
15	William A. Snow.....	32.28	15.78	20.16	18.66	21.48	6.24	114.60
16	Urban T. Holmes.....	37.68	17.52	18.12	18.66	19.44	3.10	114.52
17	Claude Bailey.....	36.36	16.86	18.00	17.82	18.30	5.60	112.84
18	Lay H. Everhart.....	40.20	16.74	15.78	16.02	22.62	0.96	112.32
19	Montgomery M. Taylor.....	34.08	17.94	19.14	19.74	20.40	0.80	112.10
20	William A. Moffett.....	32.16	16.44	19.08	18.30	20.34	5.50	111.92
21	Lawrence H. Moses.....	39.00	17.04	17.88	21.54	15.06	0.16	110.06
22	Albertus W. Catlin.....	36.24	17.10	17.10	16.98	18.36	3.55	109.38
23	Claude B. Price.....	30.60	18.54	19.08	16.74	18.30	5.80	109.15
24	Franklin S. Riesing.....	34.92	16.80	17.16	19.14	16.98	3.42	108.42
25	Thomas C. Treadwell.....	32.16	18.12	19.08	17.58	16.68	4.29	107.91
26	Lucius A. Bostwick.....	33.24	18.42	19.14	15.00	19.32	2.46	107.58
27	John H. Dayton.....	34.32	17.94	19.38	16.92	15.18	3.52	107.26
28	Cyrus S. Radford.....	33.36	15.42	16.32	15.66	21.54	4.86	107.16
29	Charles O. Bond.....	32.76	15.78	17.70	16.08	19.74	4.96	107.02
30	Franklin B. Sullivan.....	34.44	16.02	18.00	16.68	19.50	0.83	106.47
31	John R. Edie.....	30.48	15.12	15.66	19.50	20.04	4.61	106.41
32	Wendell C. Neville.....	31.32	15.06	16.80	17.52	18.78	4.19	103.67
33	John W. Dinges ¹	32.64	17.34	17.28	15.00	15.60	5.00	103.46
34	Doctor K. Diamukes.....	32.64	16.02	17.16	15.84	18.18	1.95	101.79
35	William T. Saunders.....	32.64	15.06	16.74	15.72	17.46	3.39	101.01
36	Eugene D. Ryan.....	31.68	15.00	17.58	17.04	16.62	2.98	100.90
37	Erwin H. McDonald.....	31.08	15.18	18.54	16.44	15.90	1.92	99.06
38	Julius L. Latimer.....	31.44	16.74	17.64	16.14	15.00	0.99	97.65
†	George F. Gibbs.....	31.32	14.46	17.64	23.10	22.38	1.70	110.60
†	Henry S. Ritter.....	35.88	14.82	19.20	15.78	16.62	7.30	109.60
‡	Frank H. Kochersperger ²	29.16	15.64	17.52	16.02	23.16	5.31	107.01
§	Frederick L. Eaton ²	31.44	14.76	19.44	17.46	16.14	1.38	100.62
§	Frank Holland.....	29.76	15.66	17.28	14.40	19.74	1.79	98.63
†	John P. J. Ryan.....	30.84	14.62	17.04	15.90	16.80	2.75	97.65
39	Frederick W. Ballachmider.....	30.48	15.18	17.10	14.88	17.58	2.02	97.84
§	George C. Ward.....	28.68	12.48	15.72	15.66	18.48	0.35	91.37
§	John L. Soule.....	25.80	14.88	17.10	15.18	15.42	2.46	90.84
α	Walter S. Norton.....	α		17.70	α	α	5.50	

¹ Died September 10, 1888.

² Subject to examination.

Merit-roll of naval cadets, fourth class, 71 members, at the annual examination, June, 1888

Order of merit.	NAME.	English and his- tory.	Algebra and geo- metry.	French and Span- ish.	Conduct.	Average.
	Maxima.....	24	24	24	4	76
01	John K. Robinson	21.24	24.48	22.02	2.81	71.15
02	Frank B. Kahn	21.66	22.02	22.38	3.45	70.11
03	Horatio G. Gilmer	20.76	24.00	21.18	3.43	69.57
04	Reginald R. Bolknop	21.54	20.64	23.04	3.97	69.19
05	Richard H. Watt	20.40	23.16	21.12	3.85	68.53
06	Albert S. McLomere	20.10	20.28	24.48	2.83	67.69
07	Henry G. Smith	18.84	22.50	21.42	3.73	66.49
08	Clark D. Stearns	19.50	19.26	21.84	3.80	64.49
09	Daniel R. Nisde	20.34	19.98	21.42	2.69	64.43
10	Lucien G. Smith	20.58	18.12	22.30	3.61	64.41
11	Henry H. Hough	18.84	17.70	24.00	3.76	64.30
12	Henry C. Knensh	20.94	18.00	22.06	3.20	64.22
13	Charles F. Preston	17.88	20.58	21.84	3.36	63.64
14	Arthur L. Willard	20.58	18.36	20.46	3.71	63.11
15	Edwin T. Pollock	19.32	18.96	21.12	3.32	62.78
16	John G. F. Moale	19.32	18.24	21.36	3.71	62.63
17	George H. Shepard	20.70	18.90	19.98	2.71	62.29
18	Harley H. Christy	19.32	20.58	18.84	3.04	61.78
19	De Witt Blamer	18.78	22.20	18.30	2.44	61.72
20	Sullivan T. Sparkman	20.52	18.72	21.06	3.55	61.45
21	John H. Rowen	17.04	22.92	17.04	3.31	60.31
22	Archibald Anthon	18.06	16.02	22.92	3.07	60.07
23	William H. McGinnis	20.04	17.04	19.20	3.11	59.45
24	David V. H. Allen	18.78	18.06	18.60	3.36	58.80
25	Milton E. Reed	19.14	16.26	19.50	3.76	58.72
26	Charles R. Emrich	19.72	17.94	19.14	2.23	58.63
27	Kenwick J. Hartung	17.94	19.08	17.34	3.41	57.77
28	James F. Carter	18.06	17.34	18.24	3.37	57.01
29	George W. Lowe	18.50	16.74	18.06	3.00	56.76
30	Henry H. Caldwell	19.56	15.12	18.30	3.24	56.22
31	Irving Blunt	18.06	17.22	17.58	3.23	56.09
32	William H. Ford	17.04	15.60	19.68	3.75	56.07
33	Bron Williams	18.84	16.14	18.30	2.71	55.99
34	Edward G. Rose H	17.40	17.10	18.84	3.21	55.55
35	Thomas J. Scott	17.40	17.46	17.82	2.73	55.41
36	William D. Protherton	17.82	16.32	17.88	3.53	55.35
37	William W. Beck	17.04	16.32	17.76	3.04	54.75
38	Edwin J. Magill	17.76	15.30	18.00	3.00	54.66
39	Isa H. Swisher	17.76	16.56	17.34	2.93	54.70
40	William S. McKelvey	18.06	15.78	17.28	3.29	54.51
41	Adelbert Altman	17.34	15.36	17.76	2.91	53.67
42	Walter Evans	16.50	17.04	16.02	2.68	53.54
43	Robert L. Flowers	16.50	15.66	18.00	3.12	53.54
44	Robert H. Lato	17.64	16.68	16.26	2.93	53.51
45	Charles E. Scott	17.10	15.66	18.12	2.50	53.49
46	Robert H. Doughty	16.14	17.34	16.38	3.41	53.27
47	Henry G. MacFarland	17.70	15.54	17.88	2.91	53.21
48	John N. Brown	15.66	16.06	16.20	3.25	53.11
49	Thomas K. Craig	17.46	15.00	17.72	2.47	52.83
50	Harvey D. Smith	16.78	16.02	15.32	3.28	52.39
51	Robert H. Brown	16.18	16.06	15.96	3.25	51.77
52	William K. Nye	15.64	20.04	14.34	3.24	51.09
53	John Y. Moore	16.50	15.36	16.26	2.80	50.98
54	Frederick J. MacArthur	16.92	15.00	15.00	2.77	50.79
55	Charles W. Lee	17.10	15.30	15.46	2.82	50.77

Merit-roll of naval cadets, fourth class, etc.—Continued.

Order of merit.	NAME.	English and his- tory.	Algebra and ge- ometry.	French and Span- ish.	Conduct.	Aggregate.
		24	24	24	4	76
	Maxima					
56	Bernard H. Camden	15.84	16.26	15.90	2.56	50.56
57	Thomas L. Jenkins	16.50	15.48	16.26	2.32	50.56
58	Will W. Leonard	15.18	15.18	17.22	2.43	50.01
59	Louis H. Gross	16.08	15.06	16.86	1.79	49.79
60	Elisha Theall	15.00	15.54	16.14	2.71	49.39
61	William J. Reese	15.66	15.00	16.02	2.63	49.31
62	Wiley S. Embrey	15.36	15.00	16.32	1.97	48.65
†	Peter S. Pillot	16.26	14.46	19.20	3.25	53.17
†	Chester Wells	18.48	14.88	15.30	2.97	51.63
†	Edward Trickle	15.12	14.52	16.56	3.31	49.51
‡	Clarence D. Gilchrist	16.92	13.38	14.82	3.73	48.85
†	George Richard	14.88	15.60	15.36	2.72	48.56
‡	William L. Lancaster	15.84	14.46	14.88	2.88	48.06
†	Roby Robinson	15.12	14.82	15.36	2.15	47.45
‡	Randolph Ridgely	15.12	13.56	13.86	2.53	45.07
α	Charles T. Jewell	a	a	a	2.36	

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *Naval Cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one Naval Cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.)

III. The course of Naval Cadets is six years.—(*Rev. Stat.*, § 1520.)

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the Naval Cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. At least ten appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for Naval Cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be between the ages of fourteen and eighteen years, and physically sound, well-formed, and of robust constitution."—(*Rev. Stat.*, § 1517.)

VII. Candidates who may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examinations.

No leave of absence will be granted to Cadets of the fourth class.

EXAMINATION.

VIII. "*All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners.*"—(*Rev. Stat.*, § 1515.)

IX. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate; viz.,

Feeble constitution, inherited or acquired;

Retarded development;

Impaired general health;

Decided cachexia, diathesis, or predisposition;

Any disease, deformity, or result of injury that would impair efficiency; such as—

Weak or disordered intellect;

Cutaneous or communicable disease;

Unnatural curvature of spine, torticollis, or other deformity;

Inefficiency of either of the extremities or large articulations from any cause;

Epilepsy or other convulsions within five years;

Impaired vision, disease of the organs of vision, imperfect color sense;

Impaired hearing or disease of the ear;

Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;

Impediment of speech to such an extent as to impair efficiency in the performance of duty;

Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;

Hernia or undescended testis;

Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;

Disease of the genito-urinary organs;

Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the Academic Board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write, from dictation, paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or compound, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon and the relation between the Troy and Avoirdupois pounds and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on Arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square and cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of Arithmetic as will enable them to apply the various principles to the solution of any complex problem which can be solved by the methods of Arithmetic; in other words, they must possess such a complete knowledge of Arithmetic as will enable them to proceed at once to the higher branches of Mathematics without further study of Arithmetic.

ALGEBRA.—The examination in *Algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English Grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of Orthography, Etymology, and Syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the uses of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; e. g.,

"They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words, thus:

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected, thus:

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to have*

been there and seen it. 5. There's a sweet little cherubim sits up aloft to keep watch for the life of poor Jack!

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definition of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast-lines; the direction and position of important mountain-chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they empty; the position of important seas, bays, gulfs, and arms of the sea; the position of independent states, their boundaries and capital cities; the position and direction of great peninsulas and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and colonial possessions; locality of cities of historical, political, or commercial importance (attention is especially called to the rivers and bodies of water on which cities are situated); the course of a vessel in making a voyage between well known sea-ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other states, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, and of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with so much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and fix their position. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies: royal, proprietary, and charter. Name the colonies that originally existed within the present limits of *Massachusetts*; of *Connecticut*. When were those colonies united? What did the colony of *Pennsylvania* include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the *Revolution*? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the *United States*, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the *Constitution*.

Give the names of the *Presidents*, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as *Naval Cadets*, and become students of the *Academy*. Each *Cadet* will be required to sign articles by which he binds himself to serve in the *United States Navy* eight years (including his time of probation at the *Naval Academy*), unless sooner discharged. The pay of a *Naval Cadet* is \$200 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz.,

One dress jacket.....	\$19.00	One hand-glass	\$0.45
One blouse.....	12.00	One jack-knife .....	.53
Two pairs trousers	22.00	Six sheets	3.42
Two working suits	2.28	Hammock clews.....	.40
One overcoat.....	22.00	One pair bathing trunks .....	.20
One rubber coat.....	4.75	Three pairs white thread gloves ..	.81
One rubber hat.....	.92	Two black silk neckties .....	.64
Two pairs regulation leggins	1.44	Two clothes bags.....	.50
One parade cap	2.55	One hammock mattress.....	2.85
One knit cap.....	.66	a One requisition book .....	.42
One mug.....	.10	a One pass book .....	.40
One soap box .....	.62	a One stencil, ink, and brush .....	.45
One laundry book.....	.34	a One bottle of indelible ink .....	.18
One pair of blankets.....	3.75	a One wash basin and pitcher.....	.84
Two pairs of high shoes	9.00	a One pair gymnasium slippers....	.85
One pair of overshoes .....	.63	*One whisk brush .....	.15
Eight white shirts	8.00	*One coarse comb .....	.12
Twelve linen collars	1.68	*One cake of soap .....	.10
Eight pairs of cuffs.....	2.00	*One hair brush .....	.50
*Eight pairs of socks.....	2.00	*Stationery .....	.50
*Eight towels.....	2.00	*Twelve white handkerchiefs.....	2.52
*Shaving outfit	1.30	*One pair suspenders.....	.36
*Four pairs drawers (winter)	5.00	*Four night shirts.....	2.52
b Four pairs drawers (summer)	1.84	*One tooth brush .....	.20
*Four undershirts (winter)	5.00	*Thread and needles.....	.15
b Four undershirts (summer)	2.00	*Blacking brush and blacking....	.39

When moving into Cadet Quarters, Cadets will supply themselves with the following articles, viz.,

a Two bedspreads.....	\$2.84	a One rug	\$1.15
a Two pairs drill gloves	1.00	a One hair mattress.....	5.10
a One slop jar .....	.90	a One straw mattress.....	1.32
a One spatter-cloth.....	.90	a One broom .....	.75
One hair pillow .....	.75	Six pillow cases.....	1.50
One mirror.....	1.60		

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice-ship, viz.,

Three working suits.....	\$3.42	One pair rubber leggins.....	\$0.85
Four woolen shirts.....	7.52	One pair high shoes	3.75
Three white sailor hats.....	1.20	One knit cap.....	.66

Articles marked *a* will not be taken on board the practice-ship.

Of the articles marked *b* Cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the Cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the store-keeper.

Each Naval Cadet must on admission deposit with the Pay Officer the sum of \$20, for which he will be credited on the books of that officer, to be expended by direction of the Superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing.....	\$171.12
Deposit for books, &c.	20.00

Total amount required 191.12

The value of clothing brought from home is to be deducted from this amount.'

Each Naval Cadet *one month after admission* will be credited with the amount of his actual expenses in traveling from his home to the Academy.

XIV. A Naval Cadet who voluntarily resigns his appointment within a year of the time of his admission to the Academy will be required to refund the amount paid him for traveling expenses.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution.	Todhunter's Higher Algebra.
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenet's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRENCH: Sauveur system of teaching languages.	Sauveur Petites Causes. Bellows's Pocket Dictionary.*

COURSE OF INSTRUCTION.

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics</i>	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate co-efficients and the binomial theorem; permutations and combinations; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations.	Todhunter's Higher Algebra. Bowditch's Useful Tables.
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Chauvenet's Geometry
<i>English Studies, History, and Law</i>	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of letters and telegrams. Themes.	A. S. Hill's Rhetoric. Ayres's Orthoepus Ayres's Verbalist
	3	4	HISTORY: Program of colonial development in America, and the history of the United States; important points in the naval history of the United States by notes or lectures.	Ellis's History of the United States. Mitchell's Atlas.*
<i>Modern Languages</i>	5	4	FRENCH: Sauveur system of teaching languages.	Petite Grammaire Française pour les Anglo-Bellows's Pocket Dictionary.*
			SPANISH: Robertsonian system. [Given as an advanced course.]	Robertson's Spanish Course. Tauchnitz Pocket Dictionary.*
			GERMAN: Dreyssing's method of teaching languages.	Dreyssing's Cumulative Method and Verbs Drill. Tauchnitz Pocket Dictionary.*

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections; representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order.	Church's Descriptive Geometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry; Todhunter's Trigonometry. Bowditch's Useful Tables.
<i>English Studies, History, and Law.</i>	3 2	1 3	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seely's English Lessons for English People; Abbott's How to Write Clearly. Ayres's Orthoepist.* Ayres's Verbalist.*
	2 1	1 3	HISTORY: Contemporary history, including the comparative study of governments, institutions, and political geography.	The School Herald. Martin's Statesman's Year Book.* Mitchell's Atlas.*
	2	3	LAW: Constitution of the United States.	Andrews's Manual of the Constitution.
<i>Modern Languages.</i>	3		FRENCH: Reading and translating French comedy; conversation and grammar. SPANISH: The Robertsonian system; conversations thereon; reading and translating extracts from modern authors; writing original themes. [Given as an advanced course.] GERMAN: Continuation of fourth-class course; reading German comedy; writing original themes. [Given as an advanced course.]	Bücher's Series of French Plays. Bercy La Langue Française, 1 ^{re} Partie. Bellows's Dictionary.* Robertson's Spanish Course. Knapp's Spanish Readings. Dreyspring's Cumulative Method and Verb Drill. Ehlerman's Collection of German Plays. Tauchnitz Pocket Dictionary.*
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and planes, the construction of geometrical solids, and the projections and sections of surfaces and solids.	Tomkin's Machine Construction and Drawing.*

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	5	4	<p>PHYSICS: An elementary course intended to present the leading principles and the correlation of the branches of physical science; to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures.</p> <p>CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory; experiments illustrating the daily recitations, and the determination of simple salts, acids, and bases. Lectures.</p>	<p>Daniell's Principles of Physics.</p> <p>Practical Physics, by Stewart and Gee.</p> <p>Ramsen's General Chemistry.</p> <p>Ramsen's Organic Chemistry.</p> <p>Lecture Notes.</p>
<i>Mathematics.</i>	1	4	<p>DESCRIPTIVE GEOMETRY: Course for first term continued. Warped surfaces, and surfaces of revolution; development of single-curved surfaces; intersection of surfaces; tangent lines and planes; projections of the sphere; axonometric projections; shades and shadows.</p>	Church's Descriptive Geometry.
	4	4	<p>ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of co-ordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree; equations of the plane, of lines in space, and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.</p>	C. Smith's Conic Sections; Abbe's Solid Geometry.
<i>Modern Languages.</i>	2	4	<p>FRENCH: Reading and conversation. Translation from English into French themes.</p> <p>SPANISH: Continuation of first term course (advanced course).</p> <p>GERMAN: Continuation of first term course (advanced course).</p>	<p>Bercy La Langue Française, 2^{me} Partie.</p> <p>Bellows's Pocket Dictionary.*</p> <p>Same as first term.</p> <p>Same as first term.</p>
<i>Mechanical Drawing.</i>	4	4	<p>MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, gearing, and details of guns, machinery, and engines; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.</p>	Tomlin's Machine Construction and Drawing.*

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Steam Engineering.</i>	4	4	MARINE ENGINES AND BOILERS: Explanation of all the parts of an engine; types of engines; steam valves and other valves; generation of steam; distribution and expansion of steam; screw propellers and side wheels; the indicator and its diagrams; the power of an engine and computations relating to it; hydrometers; saturation; scale and its prevention; casualties; boilers; materials; combustion; transfer of heat; testing steam-engines; the principles of mechanism.	Sennett's <i>Marine Steam-Engine</i> . Goodeve's <i>Elements of Mechanism</i> .
<i>Mechanics and Applied Mathematics.</i>	5	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's <i>Differential Calculus</i> .
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubiture of volumes; rectification of curves; centres of gravity; moments of inertia; planimeters; rules for the approximate determination of areas and volumes; differential equations.	Johnson's <i>Integral Calculus, and Differential Equations</i> .
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations on simple harmonic motion; wave motion, sound, light, and heat. Practical work in the physical laboratory; experiments illustrating the daily recitations and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses, length of light waves. Photography.	Daniell's <i>Principles of Physics</i> . Ganot's <i>Physics</i> . Stewart's <i>Treatise on Heat</i> . Practical <i>Physics</i> , by Stewart and Gee. Kohlrausch's <i>Physical Measurements</i> . Lecture Notes.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, conversation, and themes.	Professional <i>French Reader</i> . Bellows's <i>Pocket Dictionary</i> .*
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Sketching machinery and making working drawings; making tracings and blue prints of drawings; perspective.	Tomkin's <i>Machine Construction and Drawing</i> .

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; different units of time and calendars; the moon; tides; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	White's Astronomy, Chauvenet's Spherical and Practical Astronomy; Bowditch's Navigator; American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	3½	4	Course for first term continued.	
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations in light and heat, concluded. Electricity and magnetism commenced. Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the co-efficients of expansion, and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skilful use of instruments of precision. Photography. General experiments illustrating the phenomena of static and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electromotive force; calibration of galvanometers; determination of dip and horizontal intensity.	Same as first term, and Thompson's Electricity and Magnetism. Ayrton's Practical Electricity. Day's Exercises in Electrical Measurements. Lecture Notes.
<i>English Studies, History, and Law.</i>	1	4	ENGLISH LITERATURE: Themes; Lectures.	Shakespeare's Julius Cæsar, Rolfe's Edition. School Herald.
<i>Modern Languages.</i>	1	1½	FRENCH: Same as first term.	Same as first term.

FOURTH YEAR—FIRST CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	4	4	<p>SEAMANSHIP: Fitting and rigging ships for sea; rope, blocks, and tackles; wire rope and metal fittings; purchasing weights; fitting and use of ground tackle; storage; handling vessels at wharves and docking; sails; working ship under sail and under steam; repairs to rigging, spars, rudder, and all fittings in emergencies; turning experiments; fitting and management of boats; duties of officers and crew; organization of crews; drills and evolutions; rules of the road; laws of storms; general instruction upon the management of vessels of various rigs and propellers.</p> <p>NAVAL CONSTRUCTION: Wooden ship building; ship-building in iron and steel, including the various systems of framing; keels, keelsons, stems, and ram bows; sterns, plating, deck-framing, bulkheads, rudders, miscellaneous fittings, and armor-plating; torpedo boats and vessels of special construction; sheathing of ships; launching; docks and docking; displacement and buoyancy of ships, and considerations of water-tight decks, bulkheads, and double bottoms; stability of ships, and the use of diagrams of stability; rolling and pitching of ships; water-chambers and bilge-keels; structural strength and strains of ships; materials for ship-building; tests of steel; resistance of ships; steering of ships; the qualities and performance of ships in general.</p> <p>NAVAL TACTICS: Tactical units and nomenclature; manœuvring groups of ships; fleet manœuvres.</p> <p>SIGNALING: Army and Navy (English Morse) code; Navy code of flag signals; International code.</p>	<p>Luce's Seamanship.</p> <p>Special Notes and Drawings.</p> <p>Navy Department Pamphlets.</p> <p>Reed's Ship Building.</p> <p>White's Manual of Naval Architecture.</p> <p>Navy and International Signal Books.</p> <p>Fleet Drill Book, Navy Department.</p>
<i>Ordnance and Gunnery.</i>	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat-howitzers and machine-guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p>

FOURTH YEAR—FIRST CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects	Text-books.
<i>Artillery and Gunnery.</i>	3	3	<p>INFANTRY TACTICS: School of the soldier; school of the company; school of the battalion; instruction for skirmishers.</p> <p>GUNNERY: The motion of projectiles in a non-resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Upton's Tactics.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>Exterior Ballistics (Naval Academy publication).</p> <p>Ordnance Notes.</p>
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; the use of instruments, especially those for determining terrestrial latitude and longitude; different units of time; calendars; the moon; tides; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.</p> <p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the constructing and use of navigating instruments, the use of tables, and the solution of problems, determination of meridian distances.</p>	<p>White's Astronomy (Chauvenet's Spherical and Practical Astronomy).</p> <p>Bowditch's Navigation.</p> <p>American Ephemeris and Nautical Almanac.</p> <p>Bowditch's Navigation.</p> <p>"Navigation" arrayed as a text-book for the U. S. Naval Academy.</p>
<i>Mechanics and Applied Mathematics.</i>	3	1	METHOD OF LEAST SQUARES. The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulae, independent observations, conditioned observations.	Merriman's Method of Least Squares.
	3	3	APPLIED MECHANICS: Elasticity, stress and strain; theory of structures, strength and deflection of beams, beams of uniform resistance.	Cottrell's Applied Mechanics.
<i>Physics and Chemistry.</i>	3	4	<p>PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory, determination of the constants of galvanometers, testing ammeters and voltmeters, running dynamos and electric motors and measuring their efficiency, experiments on the electric transmission of energy, testing cables and electric light wires, experiments upon induction; practice in photography and micro-photography.</p> <p>CHEMISTRY: A short course in chemical analysis.</p>	<p>Same as second class year.</p> <p>Lecture Notes.</p>

FOURTH YEAR—FIRST CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	5	4	Course of the first term continued.	
<i>Ordnance and Gunnery.</i>	5½	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors which arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas (of Noble and Abel) connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>The Elastic Strength of Guns (Naval Academy publication).</p> <p>Interior Ballistics (Naval Academy publication).</p> <p>Berger's Probability of Hitting an Object.</p>

FOURTH YEAR—FIRST CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of the deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle, and the mechanical correction of the deviation and heeling errors. Navigation.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projections; running surveys.</p>	<p>Howell's Theory of the Deviations of the Compass.</p> <p>Evans's Elementary Manual for the Deviations of the Compass in Iron Ships.</p> <p>Chauvenet's Spherical and Practical Astronomy.</p> <p>Howell's Marine Surveying.</p> <p>Projection Tables.</p> <p>Bowditch's Navigator.</p>
<i>Physiology and Hygiene.</i>	12	4	<p>PHYSIOLOGY AND HYGIENE: General description of the human body and its functions. Hemorrhage, its causes and methods of arrest. Drowning, means of resuscitation therefrom. Common accidents, measures to be adopted therein.</p> <p>Ventilation, necessity for, and means of, in ships and houses.</p> <p>Bathing, exercise, clothing.</p> <p>Foods; digestibility of, methods of cooking; what the body requires and does not require.</p> <p>Impure water, alcoholic drinks, tobacco, and other narcotics; their nature and effects in various amounts, on the human system.</p> <p>Habit, its inheritance, formation, and correction. Requisites for a healthy body and a sound mind.</p> <p>Specific contagious diseases.</p> <p>Lectures, notes, and illustrations.</p>	Cutter's Comprehensive Physiology.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics							4	5
Ordnance and Gunnery							3	5
Astronomy, Navigation, and Surveying						2	3	4
Steam Engineering					4	3		4
Mechanics and Applied Mathematics					5	5	3	4
Physics and Chemistry				5 F	4	4	3	4
Mathematics	6	5	5	5				5
English Studies, History, and Law	5	5	4	1				5
Modern Languages	5	5½	3	2	1 F	½ F		5
Mechanical Drawing			4	2½	2	1		5
Physiology and Hygiene							1½	5

64
 85-14
 5 4 6 7 5-12
 116
 115
 212
 181
 346
 330
 27
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 21

TABLE OF CO-EFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class.	Maxima for four years.	Maxima for final graduation.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>						
Seamanship, Ship Building, and Naval Tactics				17		56
Cruise Reports, Navigation Note Books, Journals, and Station Bills						24
Practice Cruise				5	88	
<i>Ordnance and Gunnery.</i>						
Ordnance Instructions, Infantry Tactics, and Gunnery				18	72	44
Ordnance and Gunnery						
<i>Astronomy, Navigation, and Surveying.</i>						
Astronomy, Navigation, and Surveying			3	13	76	44
Practice Cruise				3		
<i>Steam Engineering.</i>						
Steam Machinery, Marine Engines, and Boilers			12			
Practical Instruction in Steam				2	68	44
Summer Practical Work			3			
<i>Mechanics and Applied Mathematics.</i>						
Differential and Integral Calculus, and Mechanics			16			
Least Squares and Strength of Materials				5	80	
<i>Physics and Chemistry.</i>						
Chemistry and Physics		6				
Physics			12			
Physics				5	92	
<i>Mathematics.</i>						
Algebra and Geometry	6					
Trigonometry, Analytical Geometry, and Descriptive Geometry		12			72	
<i>English Studies, History, and Law.</i>						
English and History	6					
English, History, and Law		6			48	
<i>Modern Languages.</i>						
French, Spanish, and German	6	6	5			
French, Spanish, and German					68	28
<i>Mechanical Drawing.</i>						
Mechanical Drawing		6	4		40	
<i>Miscellaneous.</i>						
Physiology and Hygiene				3	12	
Conduct	1	2	3	5	44	
Maxima for each class	76	152	228	304	760	240
Deduction for each demerit	0.013	0.082	0.060	0.133		

* In making up the standing for a year, the second term is given double the weight of the first term.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy codes; management of steam launches; steam fleet tactics (with steam launches).

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal, with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; and from these observations finding the approximate and the exact co-efficient and the horizontal and vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors (motive and turret).

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Months.	Weeks.	First Division.	Second Division.	Third Division.	Fourth Division.
Oct -----	1	Company (4).	Battery (4).	Target great guns (4).	Steam tactics (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	2	Battery (4).	Company (4).	Steam tactics (4).	Target great guns (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Nov -----	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
		Target great guns (4).	Steam tactics (4).	Company (4).	Battery (4).
	4	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Dec -----	2	Steam tactics (4).	Target great guns (4).	Battery (4).	Company (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
		Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Jan -----	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
		Steam.	Steam.	Practical ordnance.	Steam.
	2	Steam.	Broadsword.	Steam.	Practical ordnance.
		Practical ordnance.	Steam.	Broadsword.	Steam.
Feb -----	3	Steam.	Practical ordnance.	Steam.	Broadsword.
		Small sword.	Steam.	Practical ordnance.	Steam.
	4	Steam.	Small sword.	Steam.	Practical ordnance.
		Practical ordnance.	Steam.	Small sword.	Steam.

SEMI-ANNUAL EXAMINATION.

5					
Feb -----	1	Steam.	Practical ordnance.	Steam.	Small sword.
		Broadsword.	Steam.	Seamanship.	Steam.
	2	Steam.	Broadsword.	Steam.	Seamanship.
		Seamanship.	Steam.	Broadsword.	Steam.
Mar -----	1	Steam.	Seamanship.	Steam.	Broadsword.
		Deviat'n compass (4).	Deviat'n compass (4).	Deviat'n compass (4).	Deviat'n compass (4).
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
		Seamanship.	Seamanship.	Seamanship.	Seamanship.
April -----	3	General quarters.	General quarters.	General quarters.	General quarters.
		Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
May -----	5	Skirmish (4).	Target great guns (4).	Torpedoes (4).	Steam tactics (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Steam tactics (4).	Torpedoes (4).	Target great guns (4).	Skirmish (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
June 1 to 10.	1	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
		General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	2	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
June 10 to Aug. 28.	3	Battalion artillery (2).	Battalion artillery (2).	Battalion artillery (2).	Battalion artillery (2).
		Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	4	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
		General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
Sept -----	5	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
		Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	6	General quarters.	General quarters.	General quarters.	General quarters.
		Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
Oct -----	7	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
		Seamanship.	Seamanship.	Seamanship.	Seamanship.
	8	Steam.	Steam.	Steam.	Steam.
		Practical ordnance.	Practical ordnance.	Practical ordnance.	Practical ordnance.

ANNUAL EXAMINATION.

June 10 to Aug. 28.	Practice cruise.			
Sept -----	On leave.			

SECOND CLASS.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	1	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Navy signals; Army signals p. m.	Machine-shop a. m. Target howitzers p. m.
	2	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Navy signals; Army signals p. m.
	3	Machine-shop a. m. Navy signals; Army signals p. m.	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine guns p. m.	Machine-shop a. m. Howitzers afloat p. m.
	4	Running steam cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Navy signals; Army signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine guns.
	5	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
	6	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.
	7	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.
	8	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Mortar practice p. m.
	9	Machine-shop a. m. Mortar practice p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.
	10	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
Sept	1	On leave.	On leave.	On leave.	On leave.
	2				
	3				
	4				

THIRD CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct	1	Company.	Battery.	Pivot guns.	Boats.
	2	Battery.	Company.	Boats.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Boats.	Company.	Battery.
Nov	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Pivot guns.	Battery.	Company.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
Jan	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Small sword.	Target small.

SEMI-ANNUAL EXAMINATION.

Feb	1	Target small arms.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
Mar	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Pivot guns (1).	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	General quarters.	General quarters.
April	1	General quarters.	General quarters.	Seamanship.	Seamanship.
	2	Target small arms (1).	Skirmish (4).	Seamanship (4).	Boat (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target small arms (4).	Boats (4).	Seamanship.
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Seamanship.	Boats (1).	Target small arms (4).	Skirmish (4).
May	1	Boats (4).	Seamanship (1).	Seamanship (4).	Seamanship (1).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battalion artillery (2).	Battalion artillery (2).	Battalion artillery (2).	Battalion artillery (2).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Small sword (3).	Small sword (3).	Small sword (3).	Small sword (3).
	8	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
(F) M		Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
(F) T		Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
(F) W		General quarters.	General quarters.	General quarters.	General quarters.
(F) Th		Boats.	Boats.	Boats.	Boats.
(F) F		Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
(F) S		Seamanship.	Seamanship.	Seamanship.	Seamanship.

ANNUAL EXAMINATION.

Jan. 1 to		
June 1 to		
Aug. 31		Practice cruise.
Sept.		On leave

FOURTH CLASS.

Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct -----	1	Company.	Battery.	Gymnastics.	Boats.
	2	Battery.	Company.	Boats.	Gymnastics.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Nov -----	4	Gymnastics.	Boats.	Company.	Battery.
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Gymnastics.	Battery.	Company.
Dec -----	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	1	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
	4	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
SEMI-ANNUAL EXAMINATION.					
Feb -----	1	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Dancing.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Dancing.
Mar -----	4	Dancing.	Rigging loft.	Dancing.	Gymnastics.
	1	Gymnastics.	Dancing.	Rigging loft.	Dancing.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
April -----	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Rigging loft (4).	Skirmish (4).	Seamanship (4).	Boats (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Rigging loft (4).	Boats (4).	Seamanship.
	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Skirmish (4).
	2	Boats (4).	Boats (4).	Rigging loft (4).	Seamanship (1).
May -----	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Rigging loft (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	1	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	4	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
Fifth wk.)	1	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
	2	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	3	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Th.	4	General quarters.	General quarters.	General quarters.	General quarters.
	1	Boats.	Boats.	Boats.	Boats.
	2	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
S.	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4				
ANNUAL EXAMINATION.					
ractice cruise.					
1	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
2	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
3	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
4	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.

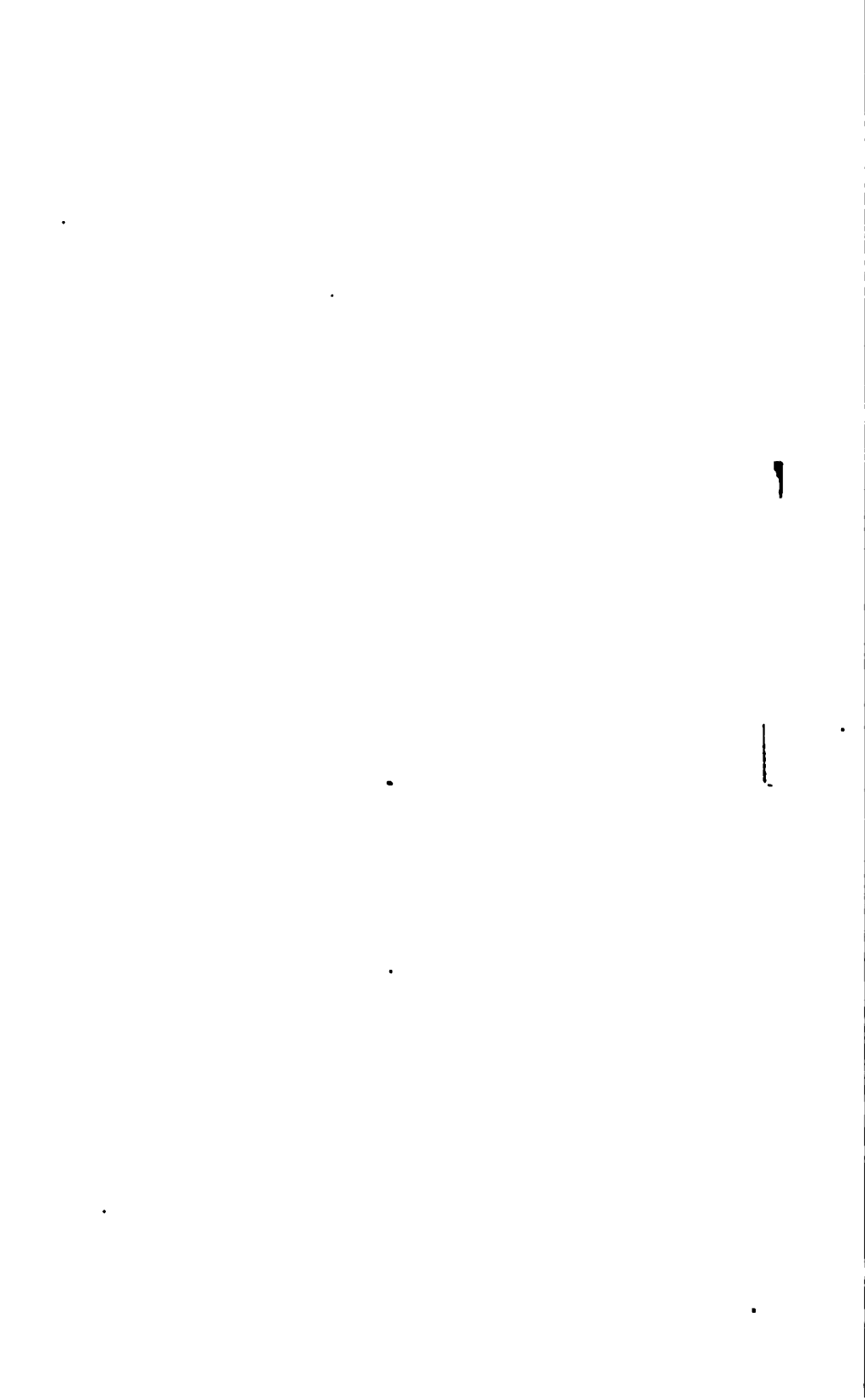
* Swimming daily.

Kind of instruction.	During the academic year.				Total number of instructions during academic year.	During summer months.				Total number of instructions, exclusive of practice cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.	
School of the company	4	5	5	9	23					23
School of the battalion, infantry	10	11	11	11	43					43
Skirmish drill	4	4	4	4	16					16
Broadsword	10	9			19					19
Small sword	5	10	18		33					33
Practical instruction in deviation of compass	4				4	(*)				4
Practical instruction, navigation	†14	†13				(*)				†27
Practical instruction, surveying	†10									†10
Machine shop and running shop engines	30 and †13	30			60		54			114 and †13
Running steam launches		5			5		6			11
Practical instruction in chemistry			†13							†13
Gymnastics				20	20					20
Swimming				20	20				24	24
Dancing				20	20					20

* Practice cruise.

† Study periods.

The instructions in seamanship and gunnery on board of the *Wyoming*, *Puget*, and *Steadfast* are also made instructions in running and managing the engines and boilers of those vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.



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ANNUAL REGISTER

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OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FORTIETH ACADEMIC YEAR.

1889-'90.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1889.

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ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10, of that year, under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the war department for the purpose. The course was fixed at five years, of which only the first and the last were spent at the school, the intervening three being passed at sea. This arrangement was not strictly adhered to, the exigences of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen, of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed since September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the naval school:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school and the three intermediate years at sea. The school was placed under the supervision of the bureau of ordnance and hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the academy, and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the academy as a practice-ship, and the annual practice-cruises were begun.

After the system had been in operation a year, new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following-named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea-

in the middle of the course, thus making the four years of study consecutive. The practice-cruise supplied the place of the omitted sea-service, and gave better opportunities of training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the academy was moved back to Annapolis, where it has since remained.

When the bureau of navigation was established, July 5, 1862, the academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the navy department, the administrative routine and financial management being still conducted through the bureau. On the 11th of March, 1869, this official connection with the bureau ceased, but was renewed by the general order of the navy department issued June 25, 1869.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third-assistant engineers was ordered to the academy for instruction. The course embraced the subjects of steam-engineering, mechanism, chemistry, mechanics, and practical exercises with the steam-engine and in the machine-shop. This class was graduated in June, 1868, together with two cadet-engineers who had entered the academy in 1867. After an interval of four years, in October, 1871, a new class of cadet-engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and in 1873 new classes were admitted, the first of which left the academy in 1874 and the second in 1875. By an act of congress, approved February 24, 1874, the course of instruction for cadet-engineers was made four years instead of two; the new provision was first applied to the class entering the academy in the year 1874. This class was graduated in June, 1878.

By an act of congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the naval academy, but in lieu thereof naval cadets shall be appointed from each congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the naval academy shall thereafter be designated and called 'naval cadets'; and, from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and engineer corps of the navy and of the marine corps: *And provided further*, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which have occurred in the same grades during the preceding year, such appointments to be made from the graduates of the year at the conclusion of their six years' course, in order of merit, as determined by the academic board of the naval academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year 1882. And if there be a surplus of graduates, those who did not receive such appointment shall be given a certificate of graduation, an honorable discharge, and one year's seapay, as now provided by law for cadet-midshipmen; and so much of section 1521 of the Revised Statutes as is inconsistent herewith is hereby repealed."

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the naval academy, with a proper certificate of graduation."

The act of congress, approved March 2, 1889, provides that "the academic board of the naval academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the naval academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grade aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available."

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years."

SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

Assumed command:

- Sept. 3, 1845.—Commander Franklin Buchanan.
- Mar. 15, 1847.—Commander George P. Uphur.
- July 1, 1850.—Commander Cornelius K. Stribling.
- Nov. 1, 1853.—Commander Louis M. Goldsborough.
- Sept. 15, 1857.—Captain George S. Blake.
- Sept. 9, 1865.—Rear-Admiral David D. Porter.
- Dec. 1, 1869.—Commodore John L. Worden.
- Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
- July 1, 1878.—Commodore Foxhall A. Parker.
- Aug. 2, 1879.—Rear-Admiral George B. Balch.
- June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
- Nov. 14, 1881.—Captain F. M. Ramsay.
- Sept. 9, 1886.—Commander W. T. Sampson.

BOARD OF VISITORS, JUNE, 1889.

Commodore GEORGE BROWN, U. S. Navy, *President.*

Hon. M. C. BUTLER, U. S. Senate, *Vice President.*

Hon. H. M. TELLER U. S. Senate. .
Hon. H. A. HERBERT House of Representatives.
Hon. C. H. GROSVENOR. House of Representatives.
Hon. WM. MCADOO House of Representatives.
Professor OREN ROOT Hamilton College, New York.
T. C. MENDENHALL President Rose Polytechnic Institute, Indiana.
General F. A. WALKER President Massachusetts Institute Technology.
L. C. GARLAND, LL.D Chancellor Vanderbilt University, Tennessee.
General STEWART L. WOODFORD New York.
Governor JAMES A. BEAVER Pennsylvania.

ACADEMIC CALENDAR.

1889-1890.

— — —

1889.

October 1.—Beginning of first term.....Tuesday.

1890.

Jan. 27-Feb. 1.—Semi-annual examinationMonday-Saturday.

February 1.—End of first term.....Saturday.

June 2-7.—Annual examinationMonday-Saturday.

May 31.—End of academic year, 1889-90.....Saturday.

May 15.—Examination of candidates for admission as naval
cadets.....Thursday.

September 2.—Examination of candidates for admission as naval
cadets.....Tuesday.

October 1.—Beginning of first term, 1890-91.....Wednesday.

The academic months end on the following days; viz.,

1889-1890.

October	Nov. 2	February.....	Mar. 1
November	Nov. 30	March	Mar. 29
December	Dec. 28	April	Apr. 26
January	Jan. 25	May	May 24

1890-1891.

October	Nov. 1	December	Dec. 27
November	Nov. 29	January	Jan. 24

CALENDAR FOR 1889-1890.

SEPTEMBER.							MARCH.							
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.	
1	2	3	4	5	6	7							1	
8	9	10	11	12	13	14	2	3	4	5	6	7	8	
15	16	17	18	19	20	21	9	10	11	12	13	14	15	
22	23	24	25	26	27	28	16	17	18	19	20	21	22	
29	30						23	24	25	26	27	28	29	
							30	31						
OCTOBER.							APRIL.							
		1	2	3	4	5			1	2	3	4	5	
6	7	8	9	10	11	12	6	7	8	9	10	11	12	
13	14	15	16	17	18	19	13	14	15	16	17	18	19	
20	21	22	23	24	25	26	20	21	22	23	24	25	26	
27	28	29	30	31			27	28	29	30				
NOVEMBER.							MAY.							
					1	2				1	2	3		
3	4	5	6	7	8	9	4	5	6	7	8	9	10	
10	11	12	13	14	15	16	11	12	13	14	15	16	17	
17	18	19	20	21	22	23	18	19	20	21	22	23	24	
24	25	26	27	28	29	30	25	26	27	28	29	30	31	
DECEMBER.							JUNE.							
1	2	3	4	5	6	7	1	2	3	4	5	6	7	
8	9	10	11	12	13	14	8	9	10	11	12	13	14	
15	16	17	18	19	20	21	15	16	17	18	19	20	21	
22	23	24	25	26	27	28	22	23	24	25	26	27	28	
29	30	31					29	30						
JANUARY.							SEPTEMBER.							
			1	2	3	4			1	2	3	4	5	6
5	6	7	8	9	10	11	7	8	9	10	11	12	13	
12	13	14	15	16	17	18	14	15	16	17	18	19	20	
19	20	21	22	23	24	25	21	22	23	24	25	26	27	
26	27	28	29	30	31		28	29	30					
FEBRUARY.							OCTOBER.							
						1			1	2	3	4		
2	3	4	5	6	7	8	5	6	7	8	9	10	11	
9	10	11	12	13	14	15	12	13	14	15	16	17	18	
16	17	18	19	20	21	22	19	20	21	22	23	24	25	
23	24	25	26	27	28		26	27	28	29	30	31		

OFFICERS
ATTACHED TO THE
UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,

CAPTAIN W. T. SAMPSON.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT E. K. MOORE.

Assistant to the Superintendent and Secretary of the Academic Board,

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Commandant of Cadets,

COMMANDER H. GLASS.

Assistants to the Commandant of Cadets,

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LIEUTENANT H. C. GEARING,
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*Assistant Sword-Masters,*J. B. RETZ,
G. HAINZ.

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LIEUTENANT W. F. LOW.

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*Assistants,*PASSED-ASSISTANT ENGINEER J. K. BARTON,
PASSED-ASSISTANT ENGINEER R. G. DENIO,
PASSED-ASSISTANT ENGINEER W. N. LITTLE,
PASSED-ASSISTANT ENGINEER F. H. ELDRIDGE,
ASSISTANT ENGINEER W. H. ALLDERDICE.

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 PASSED-ASSISTANT SURGEON J. D. GATEWOOD, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

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 PAY INSPECTOR J. H. STEVENSON, *Commissary and General Storekeeper.*
 PAY INSPECTOR T. T. CASWELL, *Pay Officer.*
 ASSISTANT SURGEON C. H. T. LOWMEYER, M. D.
 ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*
 J. M. SPENCER, *Assistant Librarian.*
 R. M. CHASE, *Secretary.*

Attached to the Ships,

BOATSWAIN J. S. SINCLAIR,
 GUNNER R. SOMMERS,
 CARPENTER G. W. CONOVER.

MATES.

Attached to the Santee, the Wyoming, and the Phlox,

S. GEE, B. G. PERRY,
 C. J. MURPHY, W. G. SMITH.

MARINE OFFICERS.

CAPTAIN H. A. BARTLETT, *Commanding Marines,*
 CAPTAIN J. M. T. YOUNG,
 SECOND LIEUTENANT T. C. PRINCE.

ACADEMIC BOARD.

THE SUPERINTENDENT.

THE COMMANDANT OF CADETS.

THE HEAD OF THE DEPARTMENT OF SEAMANSHIP, NAVAL TACTICS, AND NAVAL CONSTRUCTION.

THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.

THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.

THE HEAD OF THE DEPARTMENT OF STEAM-ENGINEERING.

THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.

THE HEAD OF THE DEPARTMENT OF MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.

THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

THE HEAD OF THE DEPARTMENT OF PHYSIOLOGY AND HYGIENE.

CADET OFFICERS.

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T. F. RUHM.

CADET-LIEUTENANTS,

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M. H. SIGNOR,

F. H. SCHOFIELD,
O. B. MCVAY.

CADET-MASTER AND ADJUTANT,

W. H. BUCK.

CADET-MASTERS,

H. J. ZIEGENHIER,
C. DAVIS,

L. SPEAR,
W. C. NEVILLE.

CADET-ENSIGNS,

J. V. CHASE,
L. H. EVERHART,

M. M. TAYLOR,
N. T. COLEMAN.

Cadet-petty-officers of the first class,

SNOW,
LATIMER,
RADFORD,
WILLIAMS,

PRICE,
CATLIN,
VOGLHIESANG,
BLANKENSHIP,

SULLIVAN,
MOFFETT,
BITTER,
HOLMES,

BOSTWICK,
EDIE,
BAILEY,
DATTON.

Cadet-petty-officers of the second class,

ZANN,
GILLMOR,

STEARNY,
NINDE,

SMITH, L. G.,
BELKNAP.

WILLARD,
HARTUNG.

SUMMER CRUISE, 1889.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE-SHIP CONSTELLATION.

May 7 to June 24.

COMMANDER P. F. HARRINGTON, *Commanding*,
LIEUTENANT-COMMANDER W. T. SWINBURNE,

Executive Officer,

LIEUTENANT W. F. LOW, *Navigator*,
LIEUTENANT A. MCCrackin, *Watch Officer*,
LIEUTENANT T. B. HOWARD, *Watch Officer*,
LIEUTENANT T. M. POTTS, *Watch Officer*,
LIEUTENANT J. M. ORCHARD, *Watch Officer*,
ENSIGN HARRY PHELPS, *Instructor in Navigation*,

ENSIGN E. E. CAFFERTY, *Watch Officer*,

CHAPLAIN E. K. RAWSON,

MEDESON G. E. H. HARMON,

WYATT SARGENT C. H. T. LOWDELL,

YAST PAYMASTER J. B. CARPENTER.

August 14 to September 20.

COMMANDER C. D. SIGNOR, *Commanding*,
LIEUTENANT-COMMANDER W. T. SWINBURNE,

Executive Officer,

LIEUTENANT W. F. LOW, *Navigator*,
LIEUTENANT T. B. HOWARD, *Watch Officer*,
LIEUTENANT T. M. POTTS, *Watch Officer*,
LIEUTENANT J. M. ORCHARD, *Watch Officer*,
ENSIGN JOHN HOOD, *Watch Officer*,
ENSIGN HARRY PHELPS, *Instructor in Navigation*,

ENSIGN E. E. CAFFERTY, *Watch Officer*,

CHAPLAIN E. K. RAWSON,

SARGENT G. E. H. HARMON

ASSISTANT SARGENT C. H. T. LOWDELL,

ASSISTANT PAYMASTER J. B. CARPENTER.

RELATIVE STANDING OF NAVAL CADETS AT THE ANNUAL EXAMINATION, JUNE, 1889.

P denotes physically disqualified for the naval service.

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient and recommended to be dropped.

a denotes absence from examination.

Class of naval cadets appointed 1884, performing required service afloat.

Order of merit.	Name.	State from which appointed.	Date of admission.
*1	Vassant, William Newton.....	Pennsylvania.....	Sept. 4, 1884
*2	Marble, Frank.....	New York.....	Sept. 4, 1884
3	Robertson, Ashley Herman.....	Illinois.....	Sept. 4, 1884
4	Brittain, Carlo Bonaparte.....	Kentucky.....	May 19, 1884
5	Morgan, Casey Bruce.....	Mississippi.....	Sept. 4, 1884
6	Croce, William Michael.....	Indiana.....	May 19, 1884
7	Miller, Marcus Lyon.....	Massachusetts.....	Sept. 4, 1884
8	Hayward, George North.....	New York.....	May 19, 1884
9	Koster, Oscar William.....	Pennsylvania.....	April 5, 1884
10	Beswick, Delworth Wilson.....	Michigan.....	May 20, 1884
11	Hubbard, John Flavel.....	New York.....	Sept. 5, 1884
12	Lejeune, John Archer.....	Louisiana.....	May 19, 1884
13	Robison, Samuel Shelburn.....	Pennsylvania.....	Sept. 4, 1884
14	Chandler, Lloyd Horwitz.....	New Hampshire.....	Sept. 4, 1884
15	Hartrath, Armin.....	Michigan.....	Sept. 4, 1884
16	Ingate, Clarence Louis Adrian.....	Alabama.....	May 20, 1884
17	Benham, Henry Kennedy.....	New York.....	May 19, 1884
18	West, Ernest Edward.....	Georgia.....	May 23, 1884
19	Hughes, Charles Frederic.....	Maine.....	Sept. 6, 1884
20	Norton, Albert Leland.....	Ohio.....	May 23, 1884
21	Stafford, Leroy Augustus.....	Louisiana.....	Sept. 15, 1884
22	Cole, Eli Kelley.....	New York.....	Sept. 4, 1883
23	Franklin, William Buell.....	Maryland.....	May 20, 1884
24	Reid, James Henry.....	Virginia.....	Sept. 4, 1884
25	Stickney, Herman Osman.....	Kentucky.....	Sept. 4, 1884
26	Beach, Edward Latimer.....	Minnesota.....	May 20, 1884
27	Bassett, Frederick Brewster, jr.....	New York.....	May 19, 1884
28	Gates, Herbert Grenville.....	Michigan.....	Sept. 4, 1884
29	Wiley, Henry Arlosto.....	Texas.....	May 17, 1883
30	Kane, Theodore Porter.....	New York.....	May 19, 1884

Class appointed in 1885, 35 members,

Order of general merit.	Name.	State.	Date of admission.
1	Hobbes, Richmond Pearson	Alabama	May 21, 1885
2	Hork, George Henry	Michigan	May 20, 1885
3	Hoff, Arthur Bainbridge	At large	Sept. 28, 1885
4	Twining, Nathan Crook	Wisconsin	Sept. 4, 1885
5	Hutchison, Benjamin Franklin	Missouri	Sept. 8, 1885
6	Pratt, William Venable	Maine	Sept. 9, 1885
7	Kittelle, Sumner Ely	New York	May 19, 1885
8	Marvell, George Ralph	Massachusetts	Sept. 7, 1885
9	Nulton, Louis McCoy	Virginia	Sept. 8, 1885
10	Lucas, Lewis Clark	Ohio	Sept. 9, 1885
11	Pattson, John Bryson	South Carolina	May 21, 1885
12	Neumann, Bertram Stansbury	New Jersey	May 22, 1885
13	Long, Charles Grant	Massachusetts	Sept. 7, 1885
14	MacDougall, William Dugald	New York	May 19, 1885
15	Danforth, George Washington	Missouri	Sept. 7, 1885
16	Magruder, Thomas Pickett	Mississippi	Sept. 8, 1885
17	Lowndes, Edward Rutledge	Michigan	Sept. 28, 1885
18	de Steiguer, Louis Rudolph	Ohio	Mar. 17, 1885
19	Bradshaw, George Brown	Texas	Sept. 4, 1885
20	Phelps, William Woodward	Maryland	May 19, 1885
21	Kaiser, Louis Anthony	Illinois	May 20, 1885
22	Offley, Cleland Nelson	Indiana	Sept. 8, 1885
23	Cole, William Carey	Illinois	Sept. 8, 1885
24	Mitchell, George Grant	Indiana	Sept. 7, 1885
25	Fuller, Ben Hebard	Michigan	May 22, 1885
26	Brand, Charles Augustine	Connecticut	Sept. 8, 1885
27	Williams, Philip	Vermont	Sept. 4, 1885
28	Carnay, Robert Ernest	Wisconsin	May 21, 1885
29	Torhuna, Warren Jay	New Jersey	May 19, 1885
30	Dutton, Robert McMillan	California	Sept. 4, 1885
31	Harrison, William Kelley	Texas	May 22, 1885
32	Kirk, George William	Missouri	Sept. 7, 1885
33	Prechaska, Julius	Wisconsin	Sept. 7, 1885
34	Anderson, Ernest Bentley	Kentucky	May 22, 1885
35	Fernier, George Lucian	Indiana	May 21, 1885

b Resigned.

performing required service afloat.

Age at date of admission.		Order of merit.											Sea service in practice-ships.		
Years.	Months.	Seamanship, ship-building, and naval architecture.	Seamanship, practice-cruises.	Ordnance and gunnery.	Astronomy, navigation, and surveying.	Navigation, practice-cruises.	Practical instruction in steam-engineering.	Least squares and strength of materials.	Physical measurements.	Physiology and hygiene.	Conduct.	Number of demerits.	Months.	Days.	Order of general merit.
14	9	1	1	1	2	4	3	1	2	2	5	9	8	0	1
16	6	2	3	2	1	3	1	2	1	7	3	7	8	0	2
15	9	3	2	4	4	2	31	3	3	3	2	6	3	28	3
16	8	4	9	3	6	6	5	5	6	5	12	26	5	7	4
17	7	9	10	7	8	4	9	4	4	4	7	10	5	7	5
16	6	7	7	5	7	1	15	10	7	6	21	39	5	7	6
17	11	6	4	14	18	13	5	21	5	1	1	1	8	0	7
16	0	14	11	15	9	8	15	10	19	12	4	8	5	7	8
16	1	16	17	12	16	10	5	5	11	27	10	19	5	7	9
17	10	4	16	6	12	20	5	17	21	12	11	20	5	7	10
17	11	17	12	11	10	13	19	22	33	33	17	29	8	0	11
17	7	12	8	18	29	12	19	32	22	17	7	10	8	0	12
15	9	27	23	21	18	16	13	14	9	22	14	28	5	7	13
16	11	8	21	24	31	29	5	19	23	8	24	45	8	0	14
17	7	19	22	26	26	34	12	28	14	25	17	29	5	7	15
17	10	13	18	8	5	23	35	16	13	23	26	46	5	7	16
17	8	22	20	19	19	27	19	9	11	30	31	63	5	7	17
18	0	26	29	21	15	15	22	8	14	23	19	33	8	0	18
15	4	19	33	9	14	31	22	12	17	32	32	95	5	7	19
15	6	10	19	12	11	20	25	18	24	15	23	44	3	0	20
15	1	30	31	17	23	19	32	15	34	20	35	98	8	0	21
16	3	25	30	28	22	33	5	26	32	29	14	28	5	7	22
17	1	23	12	29	28	23	25	20	8	9	30	60	5	7	23
16	0	27	24	16	17	11	15	27	19	25	5	9	5	7	24
15	3	19	32	9	8	7	25	7	16	18	32	85	7	7	25
17	4	18	15	21	21	9	25	13	18	10	26	54	5	7	26
15	7	15	35	19	24	25	13	24	31	21	29	59	5	7	27
16	5	10	6	25	20	30	15	35	20	16	22	41	7	9	28
16	1	29	28	29	30	35	25	24	27	12	34	96	8	0	29
15	10	31	25	27	35	28	32	31	29	11	27	55	5	7	30
14	10	33	27	31	27	26	35	23	26	27	30	34	8	0	31
17	1	35	25	32	33	32	32	30	27	34	28	57	3	22	32
16	10	32	14	34	25	18	5	28	30	31	9	16	5	7	33
16	8	33	34	34	31	22	22	33	35	18	14	28	8	0	34
17	2	23	5	33	34	16	2	34	24	35	12	26	7	7	35

Order of annual merit.	Name.	State.	Date of admission.
30	Bailey, Claude	Arkansas	Sept. 8, 1894
14	Blankenship, John Millington	Virginia	May 29, 1894
17	Bond, Charles Otis	Iowa	Sept. 8, 1894
28	Bostwick, Lucius Allyn	Massachusetts	Sept. 7, 1894
18	Buck, William Henry	Mississippi	May 22, 1894
19	Castlin, Albertus Wright	Minnesota	May 24, 1894
6	Chase, John Valentine	Louisiana	Sept. 28, 1894
3	Coleman, Noah Tunnickliff	New York	May 21, 1894
8	Davis, Cleland	Kentucky	May 22, 1894
29	Dayton, John Havens	At large	Sept. 12, 1894
31	Dismukes, Doctor Eugene	Mississippi	May 21, 1894
1	Edie, John Rufus	At large	May 19, 1894
26	Everhart, Lay Hampton	Alabama	May 20, 1894
7	Gartley, Alonso	Iowa	May 22, 1894
25	Holmes Urban Tiger	Arkansas	Sept. 12, 1894
27	Latimer, Julius Lane	West Virginia	Sept. 20, 1894
4	McDonald, Erwin Huntington	New York	Sept. 7, 1894
1	McVay, Charles Butler	Colorado	May 19, 1894
30	Moffett, William Adger	South Carolina	Sept. 6, 1894
15	Moses, Lawrence Henry	New York	Sept. 28, 1894
25	Neville, Wendell Cushing	Virginia	Sept. 12, 1894
12	Price, Claude Bernard	Mississippi	June 2, 1894
21	Radford, Cyrus Lagg	Kentucky	May 28, 1894
1	Rising, Franklin Sydney	Nevada	May 20, 1894
22	Ritter, Henry Snyder	Pennsylvania	May 25, 1894
1	Ruhm, Thomas Francis	Tennessee	May 20, 1894
4	Schofield, Frank Herman	New York	May 21, 1894
10	Signor, Matt Howland	Nebraska	May 21, 1894
24	Snaw, William Alanson	Massachusetts	Sept. 4, 1894
2	Spear, Lawrence	Ohio	May 19, 1894
13	Sullivan, Franklin Buchanan	At large	May 22, 1894
11	Taylor, Montgomery Meigs	do	May 21, 1894
23	Treadwell, Thomas Conrad	Massachusetts	May 21, 1894
1	Vogelreang, Charles Theodore	California	Sept. 6, 1894
16	Williams George Washington	South Carolina	Sept. 28, 1894
9	Ziegemeier Henry Joseph	Ohio	May 21, 1894
6	Eaton, Frederick Lloyd, Jr	Michigan	Sept. 6, 1894
6	Kochersperger, Frank Henry	Pennsylvania	May 20, 1894
6	Ryan Eugene Dewey	New York	Sept. 4, 1894
6	Sanders, William Turner	At large	May 21, 1894

* Deleted for engineer division.

* Absent from examination; retained in second class

35 members.

Age at date of admission.		Order of merit.								Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	Astronomy.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Conduct.		Months.	Days.	
15	10	27	20	18	14	29	20	20	17	62	4	12	20
17	9	23	13	12	28	23	24	2	6	29	6	20	14
15	9	17	24	7	18	16	27	21	15	58	3	4	17
16	6	23	12	23	22	20	23	19	34	123	4	12	28
17	7	21	26	12	28	14	16	27	11	85	6	20	18
17	5	10	28	2	15	18	27	24	20	72	6	20	19
17	8	5	6	6	7	5	12	12	23	74	4	12	6
16	2	2	2	18	6	4	12	5	27	93	6	20	8
16	6	15	10	15	8	7	10	3	25	82	6	20	8
17	11	11	24	27	20	23	26	24	24	122	4	12	29
16	7	23	23	23	24	26	24	32	22	73	6	20	21
15	7	26	26	24	25	26	9	15	24	75	4	14	†
16	5	26	15	29	28	20	26	8	16	61	6	20	26
16	7	12	5	9	3	12	23	1	29	102	6	20	7
17	4	8	7	7	5	8	18	7	20	72	4	12	25
17	11	18	22	24	23	25	24	25	18	68	4	12	27
16	10	26	14	24	25	24	16	29	23	128	3	15	6
17	7	22	21	15	19	23	11	19	2	15	3	20	†
16	10	23	24	2	23	25	21	12	3	24	4	12	20
16	2	15	17	26	9	10	1	26	22	127	4	12	15
16	11	21	27	29	21	28	19	18	7	20	4	12	25
17	7	20	8	21	25	18	15	25	10	34	6	20	212
17	11	29	19	18	21	26	25	10	7	20	6	20	21
16	11	29	22	17	24	20	22	10	26	87	5	21	†
16	3	28	28	28	22	20	27	23	1	6	6	20	22
16	6	4	1	14	1	1	2	14	12	50	6	20	*1
17	4	1	2	2	11	3	4	8	12	26	6	20	4
15	5	6	20	25	4	6	6	28	26	190	6	20	10
16	7	24	25	9	15	23	22	5	5	27	4	12	24
15	6	2	4	12	2	2	2	16	13	50	6	20	2
14	10	12	10	23	10	11	27	17	28	96	5	20	13
16	7	19	9	2	15	15	7	4	20	109	6	20	11
16	11	12	22	24	25	17	21	22	18	68	6	20	22
17	7	25	20	1	26	21	5	25	9	31	4	12	†
17	1	9	16	22	12	12	14	21	21	114	4	12	16
17	1	7	18	9	12	9	8	22	4	28	6	12	9
16	5	2	2	2	2	2	2	2	2	46	2	15	2
16	8	2	2	2	2	2	2	2	2	3	5	2	2
16	6	2	2	2	2	2	2	2	2	28	2	15	2
16	1	2	2	2	2	2	2	2	2	20	5	2	2

Order of annual merit.	Name.	State.	Date of admission.
46	Allen, David Van Horn.....	Tennessee	Sept. 6, 1887
53	Althouse, Adelbert.....	Illinois	May 21, 1887
51	Anthony, Archibald.....	New York	June 9, 1887
53	Beck, William Walker.....	Maryland.....	Sept. 6, 1887
55	Belknap, Euginid Rowan.....	Arkansas.....	Sept. 5, 1887
55	Bierer, Blon Barnett.....	Kansas.....	Sept. 24, 1887
56	Blamer, De Witt.....	Iowa.....	May 18, 1887
57	Blount, Irving.....	Indiana.....	Sept. 6, 1887
58	Brotherton, William Daniel.....	Wisconsin.....	Sept. 6, 1887
59	Caldwell, Harry Handly.....	Illinois.....	Sept. 7, 1887
60	Camden, Bernard Holt.....	West Virginia.....	Aug. 27, 1887
62	Carter, James Francis.....	Pennsylvania.....	Mar. 24, 1887
62	Christy, Harley Hannibal.....	Ohio.....	May 24, 1887
63	Emrich, Charles Rulf.....	Illinois.....	May 19, 1887
64	Evans, Waldo.....	Kansas.....	Sept. 7, 1887
65	Flowers, Robert Lee.....	North Carolina.....	Sept. 7, 1887
66	Ford, William Howland.....	Iowa.....	Sept. 7, 1887
67	Gillmer, Heratie Gonzale.....	Wisconsin.....	Sept. 5, 1887
68	Gross, Louis Herman.....	Illinois.....	May 19, 1887
69	Hartung, Renwick John.....	Iowa.....	Sept. 6, 1887
70	Hough, Henry Hughes.....	Massachusetts.....	Sept. 6, 1887
71	Irwin, Noble Edward.....	Ohio.....	Sept. 23, 1887
72	Kellogg, Thomas Steele.....	At large.....	May 21, 1887
73	Kuesell, Henry Charles.....	Wisconsin.....	Sept. 6, 1887
74	Lane, Rufus Herman.....	Ohio.....	June 2, 1887
75	Lawa, George William.....	Iowa.....	May 21, 1887
77	Leigh, Richard Henry.....	Mississippi.....	Sept. 6, 1887
78	Lyle, Charles William.....	Virginia.....	Sept. 5, 1887
79	Macfarland, Horace Greeley.....	New York.....	Sept. 6, 1887
79	Magill, Louis John.....	Pennsylvania.....	June 17, 1887
84	McGrana, William Hugh.....	Tennessee.....	May 20, 1887
80	McKelvy, William Nepler.....	Pennsylvania.....	May 20, 1887
85	McLemore, Albert Sidney.....	Tennessee.....	May 22, 1887
89	Meale, John Gray Foster.....	California.....	Sept. 6, 1887
84	Myers, John Twiggs.....	Georgia.....	Sept. 27, 1887
86	Niede, Daniel Benjamin.....	Indiana.....	May 20, 1887
86	Nire, Kaga Kase.....	Empire of Japan.....	May 21, 1887
90	Pollock, Edwin Taylor.....	Ohio.....	May 20, 1887
89	Preston, Charles Francis.....	Maryland.....	Sept. 6, 1887
86	Rard, Milton Eugene.....	Iowa.....	Sept. 5, 1887
90	Reese, William James.....	Texas.....	Sept. 5, 1887

d Deficient; continued with class.

58 members.

Age at date of admission.		Order of merit.						Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Conduct.		Months.	Days.	
17	8	46	43	41	28	58	51	150	2	20	46
18	0	33	44	50	42	21	16	35	5	5	33
16	10	45	32	43	11	12	53	155	5	0	31
17	7	51	55	60	59	45	56	170	2	6	53
16	3	8	6	6	3	7	20	39	2	20	*5
17	6	26	17	28	36	36	21	45	1	2	25
15	4	4	6	20	22	25	36	84	5	5	*8
17	6	29	36	38	29	47	8	25	2	20	30
15	11	29	44	30	34	29	32	77	2	20	29
14	7	46	28	30	21	42	31	76	2	20	34
18	0	31	59	52	55	50	54	162	1	2	:
18	0	42	33	16	34	47	26	51	5	5	32
16	8	8	19	12	22	17	3	20	5	5	12
16	8	18	12	24	26	20	49	134	4	21	23
17	10	17	15	37	31	25	24	48	2	20	22
16	10	21	29	33	27	44	25	50	2	10	26
15	7	54	51	48	25	31	17	36	2	20	38
17	8	1	2	1	7	9	18	31	2	20	*2
16	2	40	39	51	43	56	59	175	4	21	51
17	0	15	20	22	33	24	14	33	2	20	20
16	8	28	38	18	1	6	5	23	2	20	14
18	0	11	26	42	44	14	34	81	2	6	21
15	9	58	55	55	49	51	55	164	5	5	†
16	4	12	22	5	5	11	29	70	2	20	11
16	7	38	14	35	40	39	42	101	5	5	36
17	3	42	41	43	38	43	57	172	5	5	45
17	1	19	35	40	46	34	7	24	1	2	27
17	1	50	41	46	58	55	30	73	1	6	48
14	8	37	31	36	41	50	60	209	2	6	49
16	4	51	57	29	20	33	43	103	5	5	†
17	7	24	33	11	18	32	33	79	2	20	24
17	11	48	50	30	32	41	21	45	5	5	39
18	0	20	9	9	2	37	44	108	2	15	15
16	8	31	27	24	11	2	19	38	2	15	18
16	8	54	51	33	46	38	47	131	2	20	44
16	10	7	17	6	8	3	28	62	5	5	*6
17	8	25	60	58	60	22	41	99	5	5	d
16	7	10	11	8	6	27	11	28	2	6	*10
16	4	14	23	39	24	15	10	26	2	17	19
17	10	23	15	13	19	4	2	13	2	20	16
17	6	57	58	53	58	57	61	234	2	20	:

Order of annual merit.			
	Name.	State.	Date of admission.
43	Richards, George	Ohio	Sept. 12, 1887
53	Robinson, Roby	Alabama	May 21, 1887
6	Robtson, John Keeler	Michigan	May 20, 1887
7	Rowen, John Howard	Pennsylvania	Sept. 27, 1887
660	Russell, Edward Gaston	Georgia	Sept. 7, 1887
41	Senn, Thomas Jones	South Carolina	May 19, 1887
25	Shepard, George Hugh	Wisconsin	Sept. 27, 1887
60	Smith, Harry Eaton	Ohio	May 20, 1887
4	Smith, Henry Gerrish	Ohio	Sept. 8, 1887
13	Smith, Lucien Greenhouse	Illinois	June 2, 1887
2	Sparkman, Sullivan Thomas	South Carolina	Sept. 24, 1887
9	Stearns, Clark Daniel	Michigan	Sept. 5, 1887
26	Sypher, Jay Hale	Arizona	Sept. 5, 1887
67	Theall, Eliaba	New York	May 20, 1887
43	Trickle, Edward	Illinois	May 20, 1887
23	Watt, Richard Morgan	Pennsylvania	Sept. 22, 1887
1	Wells, Chester	Pennsylvania	Sept. 10, 1887
17	Willard, Arthur Lee	Missouri	Sept. 7, 1887
27	Williams, Dion	Ohio	July 16, 1887
51	Zahn, Frank Baker	Pennsylvania	Sept. 8, 1887

a A bent second term, sick; continued with class, subject to examination.

b Resigned.

58 members—Continued.

Age at date of admission.		Order of merit.						Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Conduct.		Months.	Days.	
15	7	34	34	57	51	18	52	154	1	2	43
16	0	38	47	50	56	53	46	120	5	5	52
16	6	a	a	a	a	a	27	60	5	5	a
16	8	3	5	45	45	1	39	89	2	20	*7
17	9	46	44	47	50	54	43	133	2	20	550
15	5	21	40	27	48	50	38	88	5	5	41
16	9	44	21	17	16	47	57	172	1	2	35
17	5	34	39	53	56	9	35	83	5	5	40
17	5	6	4	15	9	18	8	25	2	20	*4
17	6	16	13	4	15	23	12	29	5	5	13
17	9	50	36	23	17	40	23	46	2	20	†
17	8	13	9	9	9	8	5	23	2	20	*9
16	6	36	24	30	30	37	37	86	2	20	28
14	5	54	53	56	50	34	40	94	5	5	47
17	7	48	54	48	38	30	18	37	5	5	42
15	3	5	5	13	14	12	1	12	2	20	*3
16	11	00	47	24	53	52	45	118	2	20	†
17	7	26	3	3	13	45	14	32	1	2	17
17	5	51	30	18	37	15	49	134	2	10	37
16	3	2	1	2	4	4	3	20	2	20	*1

Order of annual merit.	Name.	State.	Date of admission.
23	Allen, Charles.....	Ohio.....	Mar. 15, 1883
25	Arison, Edgar Emmett.....	Pennsylvania.....	May 18, 1884
30	Bail, Walter.....	New York.....	Sept. 6, 1884
34	Bannon, Philip Michael.....	Maryland.....	May 21, 1884
*1	Beuret, John Deugal.....	Ohio.....	Sept. 7, 1883
9	Blakely, John Russell Young.....	Pennsylvania.....	Sept. 22, 1884
26	Borden, Thomas Sheppard.....	Louisiana.....	Sept. 25, 1883
37	Breckinridge, Joseph Cabell.....	Kentucky.....	Sept. 5, 1883
11	Campbell, Joseph Randolph.....	Wyoming.....	Sept. 29, 1883
31	Chadbourne, Ralph Collins.....	Maine.....	May 21, 1884
13	Crank, Robert Kyle.....	Texas.....	Sept. 6, 1883
46	Curlett, John.....	Virginia.....	May 18, 1884
47	Davis, Austin Rockwell.....	Georgia.....	May 21, 1883
27	Davison, Gregory Caldwell.....	Missouri.....	May 22, 1884
*3	Dawson, William Charles.....	Missouri.....	Sept. 6, 1884
*7	Day, George Calvin.....	Vermont.....	May 19, 1884
51	Dennett, Stanley Pullen.....	Maine.....	May 19, 1884
17	Evans, Holden A.....	Florida.....	Sept. 5, 1883
*4	Ferguson, Homer Lemuel.....	North Carolina.....	May 21, 1884
12	Gamble, Aaron Lichtenberger.....	Indiana.....	Sept. 5, 1883
28	Gibbs, Washington Dorsey.....	Mississippi.....	May 18, 1884
44	Goodwin, Leonard.....	Pennsylvania.....	May 18, 1884
49	Hasbrouck, Raymond De Lancy.....	Idaho Territory.....	Sept. 25, 1884
32	Hines, John Fore.....	Kentucky.....	May 21, 1884
20	Hoblitzelle, William Edward.....	Missouri.....	Sept. 6, 1884
24	Huffington, Howard Williams.....	Pennsylvania.....	May 19, 1884
15	Hunsay, Charles Lincoln.....	New Hampshire.....	May 21, 1884
*5	Jewell, Charles Theodore.....	At large.....	May 19, 1887
29	Jones, Beriah Ellwood.....	Pennsylvania, at large.....	May 19, 1884
56	Kellogg, Edward Stanley.....	New York.....	Sept. 5, 1883
43	Kilbourne, Joseph Coolidge.....	Ohio.....	May 21, 1884
39	Larkin, Kestis Bonaparte.....	Virginia.....	May 21, 1884
†	Logan, William Vance.....	Indiana.....	Sept. 6, 1883
19	Low, Theodore Henry.....	Connecticut.....	May 18, 1884
35	Macklin, Charles Pearns.....	New York.....	Sept. 25, 1884
51	Mallison, George.....	North Carolina.....	May 21, 1883
48	Mather, George Herbert.....	New Jersey.....	May 22, 1884
22	McCormick, Benjamin Bernard.....	New York.....	May 19, 1883
8	McDonald, Joseph Eschiel.....	Illinois.....	Sept. 7, 1883
*6	McNamee, Luke.....	Kansas.....	Sept. 6, 1883
25	McReavy, Herbert Ellsworth.....	Washington Territory.....	May 18, 1884
†	Moses, Stanford Elwood.....	Georgia.....	Sept. 6, 1884
†	Nevis, Rollin Ray.....	Missouri.....	Sept. 7, 1883
41	Payne, Fred Rousseau.....	New York.....	May 21, 1884
†	Pollard, Charles Teed, Jr.....	Texas.....	Sept. 25, 1884
16	Pellock, Emmett Riddle.....	Illinois.....	May 18, 1884
	Porter, John Singleton.....	Tennessee.....	Sept. 25, 1883

† Dismissed.

61 members.

Age at date of admission.		Order of merit.				Sea-service in practice-ships.			Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French, Spanish, and German.	Conduct.	Number of demerits.	Months.	Days.	
17	11	34	19	19	40	68	4	17	23
15	2	36	39	7	58	157	4	17	25
16	1	52	31	53	48	95	1	27	50
16	2	56	53	57	22	42	4	17	56
17	7	2	1	8	32	57	1	27	*1
16	2	24	6	23	41	69	1	27	9
16	6	21	51	13	52	114	1	27	26
16	6	11	41	32	64	241	1	27	37
16	6	10	14	21	44	74	1	27	11
17	2	9	56	43	7	20	4	17	31
16	8	27	26	6	46	83	1	27	15
18	0	43	56	37	10	24	2	30	46
16	9	63	18	32	60	165	4	17	47
17	0	27	11	60	35	61	4	17	27
17	5	1	12	2	42	70	1	27	*3
16	6	6	2	28	33	58	4	17	*7
15	11	49	39	56	36	62	4	17	51
16	9	12	13	44	11	25	1	27	17
15	2	3	7	4	20	39	4	17	*4
15	10	7	21	22	45	82	1	27	12
16	3	57	8	37	49	99	4	17	26
16	11	53	53	20	46	83	4	17	44
17	2	43	37	58	43	71	1	27	49
17	7	33	14	41	1	8	4	17	23
17	1	38	42	42	4	14	1	27	38
15	9	18	28	54	26	49	4	17	34
17	3	13	16	34	27	50	4	17	18
15	2	8	8	12	51	106	4	13	*5
17	4	42	36	34	22	42	1	27	39
17	11	61	43	63	6	18	0	19	58
16	10	41	44	30	56	149	4	17	45
16	9	31	46	9	63	221	4	17	35
16	7	64	64	64	31	55	0	0	§
17	8	15	10	37	54	117	4	17	19
17	5	62	37	49	29	51	1	27	55
17	4	38	46	49	53	116	4	17	51
15	1	47	48	49	14	28	4	17	43
15	3	16	55	30	19	38	4	17	32
16	6	22	4	29	15	29	1	27	8
17	5	5	9	15	18	37	1	27	*6
16	7	40	51	16	38	66	3	28	33
16	0	60	63	59	16	30	1	27	†
17	6	54	60	63	27	50	0	0	§
16	9	24	27	34	62	217	4	17	...
16	0	47	61	26	39	67	1	27	
15	5	18	33	5	50	102	4	17	
15	8	45	29	54	57	152	1	27	

Order of annual merit.	Name.	State.	Date of admission.
29	Pringle, Joel Roberts Poinsett.....	Illinois.....	Sept. 6, 1888
13	Rice, Arthur.....	Indiana.....	Sept. 7, 1888
43	Ridgely, Randolph.....	Georgia.....	Sept. 8, 1888
†	Rodney, Warren.....	Texas.....	Sept. 8, 1888
48	Russell, John, Henry, jr.....	At large.....	May 18, 1888
10	Sawyer, Frederick Lewis.....	Illinois.....	Sept. 8, 1888
97	Sawyer, Josiah Grigg.....	Illinois.....	May 19, 1888
30	Sheehan, James.....	New York.....	May 21, 1888
46	Stirling, Yates, jr.....	Massachusetts.....	Sept. 8, 1888
20	Stitt, Thomas Lutz.....	Indiana.....	Sept. 8, 1888
24	Stepford, Frederick William.....	Massachusetts.....	May 19, 1888
54	Swigart, Raymond Belt.....	Iowa.....	Sept. 5, 1888
21	Symington, Powers.....	West Virginia.....	Sept. 7, 1888
14	Thompson, Leon Seymour.....	Ohio.....	May 21, 1888
73	Trant, Frederick Augustus.....	Connecticut.....	May 19, 1888
28	Wedekind, George.....	New York.....	Sept. 8, 1888
†	Zillman, Christian Charles Herman.....	Missouri.....	Sept. 27, 1888

62 members—Continued.

Age at date of admission.		Order of merit.				Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French, Spanish, and German.	Conduct.		Months.	Days.	
15	7	45	48	8	34	60	1	27	29
17	8	29	17	16	7	20	1	27	13
16	11	26	31	48	55	123	1	27	43
17	1	32	61	37	30	52	1	27	†
15	6	51	30	49	11	25	2	20	43
17	4	4	25	24	4	14	1	27	10
16	11	55	56	61	3	13	4	17	57
15	8	57	21	13	25	46	4	17	30
16	4	49	19	36	59	163	0	38	40
15	1	13	23	25	11	25	1	27	20
15	7	34	24	10	61	212	4	17	24
17	11	57	50	47	9	23	1	27	54
15	11	20	45	13	37	65	1	27	21
14	0	36	21	11	3	10	4	17	14
16	11	17	5	1	22	42	4	17	*2
16	6	29	33	45	17	36	1	27	36
17	8	23	59	45	20	39	1	27	†

Fourth Class—90 members.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
Andrews, Claude Norton	Iowa	Sept. 5, 1889	18	6		
Asbury, Louis George, Jr	Louisiana	Sept. 7, 1889	19	10		
Beahr, William Alfred	Wisconsin	May 20, 1889	18	8	1	27
Bagley, Worth	North Carolina	Sept. 5, 1889	18	8		
Baird, Lewis Conway	Indiana	Sept. 6, 1889	18	2		
Bennett, Ernest Linwood	Massachusetts	Sept. 24, 1889	17	10		
Berry, David Mark	California	Sept. 6, 1889	17	7		
Berryman, John Russell	Ohio	Oct. 3, 1889	17	8		
Bischoff, Eugene Leo	Kentucky	Oct. 2, 1889	18	1		
Boyd, Romaine Tarver	Alabama	May 18, 1889	18	6	1	27
Brady, John Richard	Pennsylvania	Sept. 6, 1889	16	11		
Campbell, Edward Hale	Indiana	Sept. 6, 1889	16	11		
Carver, Marvin	Minnesota	Sept. 27, 1889	18	5		
Chadwick, Frank Laird	Minnesota	May 18, 1889	17	2	1	27
Clark, Frank Hodges, Jr	Rhode Island	Sept. 5, 1889	17	9		
Cobb, John Addison, Jr	Georgia	May 22, 1889	16	8	1	27
Coleman, James Samuel	Alabama	Sept. 5, 1889	16	8		
Cook, Allen Merriam	Kansas	May 22, 1889	18	6	1	27
Crocker, John Archdell	Pennsylvania	May 22, 1889	17	8	1	27
Crosley, Walter Selwyn	Connecticut	Sept. 9, 1889	17	10		
Cruse, Andrew Jackson, Jr	Pennsylvania	May 18, 1889	16	4	1	27
Dalley, Harry Logan	Texas	Sept. 7, 1889	18	4		
Doddridge, John Nelson	West Virginia	Sept. 7, 1889	17	1		
Douglas, Richard Spencer	Georgia	June 2, 1889	17	10	1	27
Eberle, Joseph Duval	Arkansas	May 28, 1889	19	1		
Elder, Edwin Avery	Massachusetts	May 21, 1889	16	9	1	27
Fewel, Christopher Catron	Texas	Oct. 2, 1889	18	11		
Feld, Hubbard Moylan	Virginia	May 20, 1889	16	6	1	27
Fitch, Claude Kames	Illinois	Sept. 7, 1889	17	0		
French, Robert Abercrombie	Florida	May 22, 1889	16	9	1	27
Gise, William Kern	Illinois	June 14, 1889	18	0	1	27
Greer, George Tate	Virginia	Oct. 4, 1889	17	9		
Groff, Joseph Coblenz	Missouri	Oct. 3, 1889	19	4		
Gronebeck, William Gerard	Ohio	Sept. 5, 1889	18	0		
Haina, Peter Connor, Jr	District of Columbia	May 18, 1889	17	4	1	27
Holsinger, Gerald Long	Kansas	Oct. 2, 1889	19	8		
Hood, Gordon	Alabama	Oct. 2, 1889	18	0		
Hooker, James Clifton	Tennessee	Sept. 7, 1889	16	1		
Jackson, Orton Porter	Pennsylvania	May 18, 1889	15	9	1	27
James, Leland Frierson	South Carolina	Sept. 9, 1889	17	0		
Jenkins, Thomas Leoline	North Carolina	May 21, 1889	19	11	1	27
Johnson, John Randolph	North Carolina	Oct. 4, 1889	19	11		
Johnson, Moulton Kinsinger	Ohio	June 16, 1889	19	6		
Jones, Lewis Benson	New York	May 21, 1889	16	6	1	27
Kellogg, Thomas Steele	At Large	Oct. 19, 1889	18	2		
Lane, Charles Arthur	Missouri	May 21, 1889	18	8	1	27
Lang, Charles Jonas	Pennsylvania	Sept. 6, 1889	19	10		
Latta, Samuel Granger	Tennessee	Sept. 9, 1889	18	1		
Logan, William Vance	Indiana	June 25, 1889	17	5	1	27
Magill, Louis John	Pennsylvania	Nov. 11, 1889	18	9		
Manning, Walter James	Louisiana	May 21, 1889	16	8	1	27

b Resigned

Fourth Class—90 members—Continued.

Name.	State.	Date of admission.	Age at date of admission.		Sea-service in practice-ships.	
			Years.	Months.	Months.	Days.
KcKethan, Alfred Augustus	North Carolina	Sept. 5, 1889	17	10		
Montgomery, William Slack	Kentucky	Sept. 5, 1889	16	11		
Morris, John Ramsey	Missouri	Sept. 7, 1889	19	8		
Neill, Charles Fergus	Texas	May 21, 1889	16	2	1	27
Nutting, Daniel Chaplin, jr.	Kansas	May 21, 1889	19	9	1	27
Olmsted, Percy Napier	Oregon	May 21, 1889	17	10	1	27
Parker, Thomas Drayton	South Carolina	Oct. 3, 1889	18	2		
Pearson, Henry Allen	Utah	Sept. 6, 1889	19	8		
Perkins, Frederick King	California	May 23, 1889	16	6	1	27
Perry, Joseph Albert	Illinois	Sept. 6, 1889	15	10		
Peugnet, Maurice Berthold	Missouri	Sept. 7, 1889	18	7		
Potter, James Boyd	New Jersey	Sept. 5, 1889	16	8		
Powell, William Glasgow	New Jersey	May 18, 1889	17	8		
Powelson, Wilfrid Van Nest	New York	Sept. 6, 1889	17	0		
Pratt, Alfred Allen	Illinois	Sept. 7, 1889	16	2		
Price, Henry Bertrand	Iowa	May 20, 1889	19	11	1	27
Proctor, Andre Morton	Kentucky	Sept. 6, 1889	16	2		
Randolph, William Browne	New York	May 20, 1889	17	9	1	27
Read, Frank De Witt	Ohio	Sept. 6, 1889	19	2		
Richmond, Edgar	California	Sept. 7, 1889	17	9		
Ryan, George Whitehouse	Massachusetts	Sept. 6, 1889	18	3		
Ryan, John Paul Joseph	New York	May 22, 1889	19	9		
Scott, Guy Terrell	Nebraska	Sept. 7, 1889	16	8		
Shaw, Graham	Pennsylvania	Sept. 7, 1889	15	8		
Smith, Edward Price	Michigan	May 22, 1889	17	4		
Stearns, Edward Cheever	Ohio	May 21, 1889	17	8	1	27
Sticht, John Low	New York	Sept. 7, 1889	16	5		
Sturdevant, Richard	Pennsylvania	Sept. 6, 1889	17	7		
Townsend, Arthur Critchlow	Pennsylvania	May 22, 1889	17	0	1	27
Trench, Martin Edward	Minnesota	Oct. 3, 1889	19	10		
Upham, Frank Brooks	Montana	Sept. 6, 1889	17	0		
Vail, Thomas Holdup Stevens	New Mexico	May 25, 1889	18	6		
Valentine, William Stanley	New York	May 20, 1889	16	11	1	27
Ward, Henry Heber	New Jersey	Sept. 7, 1889	18	3		
Wayne, Mullin Harris b.	Virginia	June 11, 1889	15	9		
Wells, Chester	Pennsylvania	Nov. 15, 1889	19	1		
Whitman, Walter Bloomfield	Texas	May 20, 1889	18	6	1	27
Whittemore, Allan Pendleton	Missouri	Oct. 3, 1889	16	6		
Wilson, Thomas Sheldon	Illinois	May 20, 1889	18	1	1	27
Winship, Emory	Georgia	May 23, 1889	17	3	1	27
Wishart William Clifton	North Carolina	May 30, 1889	17	10	1	27

b Resigned.

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

November 23, 1889.

	Members.
First class	35
Second class	58
Third class	61
Fourth class	
Total	3

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

September 1, 1888, to November 21, 1889.

APPOINTED ENSIGNS.

Naval Cadet George Frederick Hawk	Class of 1887
Naval Cadet Robert Stocker	Class of 1887
Naval Cadet Elliot Snow	Class of 1887
Naval Cadet Benton Clark Decker	Class of 1887
Naval Cadet Mark Lambert Bristol	Class of 1887
Naval Cadet Benjamin Warner Wells, jr.....	Class of 1887
Naval Cadet Walter Safford Burke	Class of 1887
Naval Cadet Newton Alexander McCully, jr.....	Class of 1887
Naval Cadet Levi Calvin Bertolette	Class of 1887
Naval Cadet William Snelling Cloke	Class of 1887
Naval Cadet George Wood Logan.....	Class of 1887
Naval Cadet Edward Moale, jr.....	Class of 1887
Naval Cadet Henry Francis Bryan	Class of 1887
Naval Cadet Samuel Ray Hurlbut	Class of 1887
Naval Cadet Andrew Theodore Long	Class of 1887
Naval Cadet Edward Hovey Durell	Class of 1887
Naval Cadet Archibald Henderson Seales.....	Class of 1887
Naval Cadet Ford Hopkins Brown	Class of 1887
Naval Cadet Creighton Churchill	Class of 1887
Naval Cadet Clarence Morton Stone	Class of 1887
Naval Cadet Thomas Washington.....	Class of 1887
Naval Cadet Francis Boughter	Class of 1887
Naval Cadet Archibald Hilliard Davis.....	Class of 1887
Naval Cadet Guy Hamilton Burrage.....	Class of 1887
Naval Cadet Frank Mead Russell.....	Class of 1887

APPOINTED ASSISTANT ENGINEERS.

Naval Cadet Frank Warren Hibbs	Class of 1887
Naval Cadet Victor Blue.....	Class of 1887

APPOINTED SECOND LIEUTENANT U. S. MARINE CORPS.

Naval Cadet Herbert Lemuel Draper.....	Class of 1887
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HONORABLY DISCHARGED.

Naval Cadet Frederick Norton Kress	Class of 1887
Naval Cadet Ben Wade Stenrus	Class of 1887
Naval Cadet William Graham McMullan	Class of 1887

HONORABLY DISCHARGED—continued.

Naval Cadet Henry Lincoln Peckham	Class of 1887
Naval Cadet Charles Ernest Johnston	Class of 1887
Naval Cadet Samuel Preston Edmonds	Class of 1887
Naval Cadet Henry Asa Allen	Class of 1887
Naval Cadet Michael Boyston Pigott	Class of 1887
Naval Cadet Richard Harrison Jackson	Class of 1887
Naval Cadet Frederick Emil Swanstrom	Class of 1887
Naval Cadet Claude Stanley Cochran	Class of 1887
Naval Cadet Charles Edward Hudson	Class of 1887
Naval Cadet James Grey Ballinger	Class of 1887
Naval Cadet Colin Samuel Craig	Class of 1887
Naval Cadet Thomas Michael O'Halloran	Class of 1887
Naval Cadet William Branch Moseley	Class of 1887

RESIGNED.

Naval Cadet Curtis Dwight Wilbur, class of 1888	Sept. 1, 1888
Naval Cadet Samuel James Aiken, class of 1888	Sept. 1, 1888
Naval Cadet Louis Joseph Anderson, class of 1888	Sept. 1, 1888
Naval Cadet Stuart Warren Cramer, class of 1888	Sept. 1, 1888
Naval Cadet Moses Daniel Monroe, class of 1888	Sept. 1, 1888
Naval Cadet Louis le Sassier Young, class of 1887	Sept. 20, 1888
Naval Cadet Wiley Sims Embrey, third class	Oct. 9, 1888
Naval Cadet Walter Smith Norton, third class	Oct. 13, 1888
Naval Cadet George Fort Gibbs, third class	Oct. 17, 1888
Naval Cadet Robert Sayers, fourth class	Oct. 17, 1888
Naval Cadet James Jefferson Garth, fourth class	Dec. 17, 1888
Naval Cadet Frederick William Ballschmider, second class	Feb. 25, 1889
Naval Cadet John Paul Joseph Ryan, second class	Feb. 25, 1889
Naval Cadet Charles Follett Consaul, third class	Feb. 25, 1889
Naval Cadet Timothy Francis Maurin, third class	Mar. 1, 1889
Naval Cadet Peter Stuyvesant Pillot, third class	Mar. 1, 1889
Naval Cadet William Browne Randolph, fourth class	Mar. 30, 1889
Naval Cadet William Stanley Valentine	Apr. 29, 1889
Naval Cadet William Glasgow Powell, fourth class	May 6, 1889
Naval Cadet Thomas Holdup Stevens Vail, fourth class	May 13, 1889
Naval Cadet Percy Napier Olmsted, fourth class	May 14, 1889
Naval Cadet Graham Shaw, fourth class	May 14, 1889
Naval Cadet Thomas Leoline Jenkins, third class	May 15, 1889
Naval Cadet Lewis Conway Baird, fourth class	May 15, 1889
Naval Cadet Richard Spencer Douglas, fourth class	May 15, 1889
Naval Cadet William Lewis Murray, fourth class	May 15, 1889
Naval Cadet Charles Louis Kaufman, fourth class	May 16, 1889
Naval Cadet Guy Terrel Scott, fourth class	May 16, 1889
Naval Cadet George Peter Wager, fourth class	May 16, 1889
Naval Cadet Hugh Waldron, fourth class	May 16, 1889
Naval Cadet Albert Perrin Childs, fourth class	May 17, 1889
Naval Cadet Lucius Boltwood, fourth class	May 18, 1889
Naval Cadet James Samuel Coleman, fourth class	May 18, 1889
Naval Cadet Walter Portrum Bewley, fourth class	May 21, 1889
Naval Cadet William Wiley Sparks, fourth class	May 21, 1889
Naval Cadet James Clifton Hooker, fourth class	May 21, 1889
Naval Cadet Joseph Jennings, fourth class	May 21, 1889
Naval Cadet John Haynes Thompson, fourth class	May 2

Naval Cadet Frederick Augustus Churchill, fourth class	May 25, 1889
Naval Cadet Edwin Huntington McDonald, second class	June 24, 1889
Naval Cadet Rollin Roy Nevitt, fourth class	June 24, 1889
Naval Cadet William Vance Logan, fourth class	June 24, 1889
Naval Cadet Ernest Bentley Anderson, class of 1889	June 26, 1889
Naval Cadet Edward Gaston Russell, second class	Sept. 27, 1889
Naval Cadet Sullivan Thomas Sparkman, third class	Oct. 4, 1889
Naval Cadet Bernard Holt Camden, third class	Oct. 8, 1889
Naval Cadet Mullin Harris Wayne, fourth class	Oct. 8, 1889
Naval Cadet Louis John Magill, third class	Oct. 12, 1889
Naval Cadet Chester Wells, third class	Oct. 12, 1889
Naval Cadet Thomas Steele Kellogg, third class	Oct. 12, 1889
Naval Cadet William James Reese, third class	Oct. 14, 1889
Naval Cadet Romaine Tarver Boyd, fourth class	Nov. 24, 1889

DROPPED.

Naval Cadet Louis Labadie Driggs, second class	Jan. 22, 1889
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DISMISSED.

Naval Cadet Henry Lake Woodward, first class	Feb. 25, 1889
Naval Cadet Herbert Ellsworth McReavy, third class	Oct. 29, 1889

DIED.

Naval Cadet John Young Lang, fourth class	May 15, 1889
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MERIT-ROLLS FOR 1888-'89.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 70, showing the relative weight of the different branches, are used as co-efficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for conduct, is the final mark of the cadet for the year.

In the case of cadets who take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls." (Regulations U. S. Naval Academy, § 191.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum read "passed with distinction;" those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum read "passed."

P denotes physically disqualified for the naval service.

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

a denotes absence from examination.

Merit-roll of the graduating class of naval cadets at the conclusion of the six years' course, June, 1903.

NAME.	Cruise reports.						Final aggregate.	Assignment.
	Seamanship and naval tactics.	Ordnance and gunnery.	Navigation.	Steam-engineering.	Modern languages.	Aggregate for final examination.	Aggregate for four years.	
Maxima	56	64	64	64	34	340	760	1000
1 Stocker, Robert	45.26	36.94	33.29	30.26	28.77	203.80	690.63	Ensign.
2 Hibbs, Frank Warren	46.02	39.38	36.96	40.48	21.43	212.35	667.18	Assistant engineer.
3 Snow, Elliot	46.08	40.04	40.04	29.36	34.71	202.73	663.54	Ensign.
4 Becker, Benton Clark	46.20	41.25	36.17	35.31	24.08	207.39	656.08	Ensign.
5 Bristol, Mark Lambert	47.46	36.08	33.44	34.31	21.63	192.36	634.12	Ensign.
6 Wells, Benjamin Warner, Jr.	41.72	36.62	37.40	31.35	24.78	197.51	618.28	Ensign.
7 Burke, Walter Stafford	45.38	37.73	35.42	35.20	21.49	195.60	610.41	Ensign.
8 Metcally, Newton Alexander, Jr.	39.62	37.18	35.97	31.90	23.38	187.79	616.48	Ensign.
9 Bertolotto, Levi Calvin	44.34	36.85	28.18	30.08	22.73	184.91	601.76	Ensign.
10 Clarke, William Stelling	37.10	22.67	29.48	20.25	33.68	160.46	608.15	Ensign.
11 Logan, George Wood	44.10	37.84	35.04	29.81	26.04	198.17	578.47	Ensign.
12 Miele, Edward, Jr.	41.44	35.31	35.00	26.63	23.03	181.73	592.40	Ensign.
13 Sreane, Ben Wade	30.03	30.86	25.97	16.50	20.58	164.97	602.73	Honorably discharged.
14 Bryan, Henry Francis	43.54	39.92	32.12	37.60	24.71	170.45	598.39	Ensign.
15 Hurst, Samuel Ray	37.34	34.21	28.16	27.61	24.15	170.45	598.39	Ensign.
16 Long, Andrew Theodore	42.56	33.77	21.67	30.80	34.64	188.22	577.62	Ensign.
17 Dorell, Edward Hovey	41.16	31.90	32.00	32.45	22.24	182.98	579.64	Ensign.
18 Seales, Archibald Henderson	44.10	36.96	35.97	35.09	22.19	185.01	585.98	Ensign.
19 Brown, Ford Hopkins	39.34	23.83	28.23	26.14	26.58	162.56	575.43	Ensign.
20 McMillan, William Graham	40.04	34.10	26.05	27.61	22.08	171.32	580.06	Honorably discharged.
21 Churchill, Creighton	45.08	38.64	30.16	29.82	24.43	184.61	540.42	Ensign.
22 Stone, Clarence Morton	42.04	31.46	31.68	28.92	21.94	177.32	562.65	Ensign.
23 Peckham, Henry Lincoln	43.66	36.84	24.31	27.73	19.74	160.19	540.62	Honorably discharged.

(Order of merit.)

24	Washington, Thomas.....	37.66	33.34	30.03	27.50	22.54	21.48	171.55	566.99	738.54	Ensign.
25	Boughter, Francis.....	43.96	36.80	31.13	28.37	26.18	26.52	187.46	542.81	730.27	Ensign.
26	Davis, Archibald Hilliard.....	42.56	37.89	29.26	28.38	21.14	19.32	172.55	550.68	724.18	Ensign.
27	Burrage, Guy Hamilton.....	40.60	34.32	30.26	34.43	21.28	20.40	181.39	541.41	723.80	Ensign.
28	Blue, Victor.....	39.20	29.15	28.70	27.50	24.50	19.32	169.87	542.37	711.74	Assistant engineer.
29	Draper, Herbert Lemuel.....	38.36	29.81	26.40	26.93	22.86	18.48	164.94	543.05	707.99	Second lieutenant, marine corps.
30	Johnston, Charles Ernest.....	35.70	28.93	27.94	21.78	28.07	19.02	161.44	544.86	706.30	Honorably discharged.
31	Russell, Frank Meade.....	42.14	31.63	22.33	32.01	13.34	18.72	165.23	540.02	705.24	Ensign.
P22	Edmonds, Samuel Preston.....	38.36	28.38	28.27	24.64	23.66	19.44	162.75	541.68	704.43	Honorably discharged.
33	Allen, Henry Aaa.....	40.46	35.86	31.13	34.54	15.05	18.74	176.78	537.21	703.99	Honorably discharged.
P34	Pigott, Michael Royston.....	35.00	27.61	28.27	25.96	24.85	17.88	159.87	542.07	701.04	Honorably discharged.
35	Jackson, Richard Harrison.....	37.06	30.58	29.26	28.81	23.45	20.94	171.70	527.07	698.77	Honorably discharged.
36	Swanstrom, Frederick Emil.....	40.04	28.26	30.14	28.93	29.09	19.74	163.20	528.96	695.16	Honorably discharged.
37	Cochran, Claude Stanley.....	39.34	30.69	30.80	23.98	19.39	19.80	164.00	523.25	687.25	Honorably discharged.
38	Hudson, Charles Edward.....	37.52	30.14	27.83	25.74	19.81	20.94	161.96	506.52	686.50	Honorably discharged.
39	Ballinger, James Guy.....	35.00	25.08	24.97	24.75	20.65	18.60	149.05	517.35	686.40	Honorably discharged.
40	Craig, Colin Samuel.....	36.54	27.61	25.30	22.11	17.64	19.32	143.53	519.26	658.88	Honorably discharged.
P41	O'Halloran, Thomas Michael.....	38.20	30.14	28.71	24.64	21.94	19.32	138.85	488.19	652.04	Honorably discharged.
42	Moseley, William Branch.....	36.96	24.64	31.12	23.21	17.15	18.12	141.20	502.04	643.24	Honorably discharged.

Merit roll of the naval cadets of the class appointed in 1884.—Annual examination, June, 1888.

Order of merit.	NAME.	Astronomy, navigation, and surveying.	Local squares and other materials.	Ordnance and gunnery.	Remanship, ship building, and navigation.	Practical seamanship.	Practical instruction in steam engineering.	Physiology and hygiene.	Conduct.	Aggregate for				Aggregate for four years.
		16	17	18	19	20	21	22	23	24	25	26	27	28
1	Maximo .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	William N. Yarnall	69.16	19.15	72.15	65.84	17.95	6.20	11.16	17.07	175.73	212.60	135.29	65.28	698.96
3	Frank Marble	63.65	18.30	67.83	54.72	17.95	6.16	9.90	16.07	264.56	294.71	141.03	69.95	670.27
4	Curtis D. Wilbur	59.68	16.80	65.56	57.06	17.10	6.44	9.72	19.33	251.76	199.23	124.70	61.27	636.06
5	Ashley H. Robertson	56.06	16.15	62.04	59.40	16.70	6.52	8.91	13.07	242.99	199.12	129.48	61.23	622.92
6	Carlo B. Brittain	56.90	16.56	65.17	59.94	17.00	6.08	9.08	20.00	253.00	175.65	118.97	60.96	609.38
7	Caes. B. Morgan	57.34	16.05	63.65	58.98	16.25	6.16	9.60	10.80	222.75	143.07	124.23	62.84	604.89
8	William M. Fries	54.74	13.85	54.71	55.62	17.05	6.89	8.91	15.73	231.90	170.90	126.85	62.69	592.39
9	Marcus L. Miller	54.34	13.90	54.24	52.56	14.06	6.04	7.95	16.40	222.08	175.29	120.99	60.62	590.58
10	George N. Hayward	53.39	14.96	61.75	57.98	16.85	5.68	9.51	2.40	229.09	176.83	127.68	65.09	590.09
11	DeWorth W. Hawick	54.72	15.25	54.05	54.54	15.50	6.12	8.13	19.13	279.15	164.06	124.87	63.25	585.33
12	John F. Hubbard	55.67	15.70	59.09	56.06	16.80	5.68	10.56	11.07	279.15	164.06	124.87	63.25	585.33
13	John A. Laybourn	56.67	15.45	59.09	53.64	14.80	5.89	8.42	14.67	278.62	168.62	120.64	60.17	583.86
14	Samuel B. Robinson	56.10	16.20	59.86	52.02	16.85	6.00	8.55	17.00	272.77	172.18	119.17	57.92	582.14
15	Lloyd H. Chandler	55.45	13.70	61.56	61.36	17.80	6.52	10.92	19.29	248.54	166.24	109.80	55.97	580.55
16	Alvin Harbath	56.81	16.75	61.75	54.30	15.50	5.90	9.99	9.93	222.05	164.06	122.18	65.07	577.36
17	Clarence L. A. Ingate	55.29	15.00	61.37	53.64	15.96	5.92	8.55	19.07	224.79	157.40	120.46	62.44	575.09
18	Henry K. Bonham	53.29	15.40	67.09	50.22	14.96	5.06	8.07	16.13	221.73	172.14	116.40	61.15	573.41
19	Ernest E. West	53.84	15.60	55.67	50.22	15.00	6.36	8.40	15.00	220.33	172.42	117.78	55.04	568.67
20	Charles F. Hughes	53.84	15.60	55.67	50.22	15.00	6.36	8.40	15.00	220.33	172.42	117.78	55.04	568.67
21	Albert L. Norton	51.49	14.90	54.34	52.20	15.65	6.16	9.44	17.87	222.45	162.93	118.08	59.87	560.87
22	Leroy A. Stanford	61.94	16.95	62.65	49.14	15.06	6.04	8.10	13.07	224.54	161.37	108.71	57.21	559.83
23	Samuel J. Albee	54.24	14.85	56.43	51.44	16.00	6.70	7.98	19.13	226.67	160.62	111.04	55.15	555.38

24	Eli K. Cole	54.72	13.80	56.43	50.94	15.60	5.96	8.34	16.13	221.92	153.96	113.89	57.14	546.91
25	Louis J. Anderson	50.73	13.10	54.34	49.14	14.75	6.44	7.77	6.80	203.07	159.90	117.53	56.34	539.93
26	William B. Franklin	51.11	14.65	53.96	50.32	15.70	5.76	7.98	12.27	211.65	158.70	107.60	56.08	534.03
27	James H. Reid	49.78	13.90	54.72	48.62	14.65	5.82	7.65	16.27	209.01	163.64	105.26	55.83	532.24
28	Stuart W. Cramer	51.49	14.10	54.53	45.90	15.00	5.76	8.13	16.00	210.91	155.63	111.09	55.17	532.79
29	Herman O. Stickney	51.30	13.65	51.30	49.42	14.90	6.44	8.01	18.00	211.42	192.85	112.01	55.72	532.00
30	Edward L. Beach	50.35	14.75	51.49	46.98	14.35	5.92	7.95	14.40	206.19	156.10	105.53	57.21	525.03
31	Frederick B. Bassett, Jr.	51.11	13.65	50.54	45.18	15.30	5.00	8.25	12.27	201.90	147.67	112.63	56.08	519.28
32	Herbert G. Bates	49.21	13.15	54.15	50.40	15.05	5.76	8.31	8.13	204.16	154.79	102.32	56.37	517.64
33	Moorea D. Monroe	51.11	12.95	50.53	47.70	14.15	5.96	7.92	7.47	197.61	143.34	108.34	61.56	510.75
34	Henry A. Wiley	49.21	14.10	49.97	46.98	15.65	5.92	7.83	15.47	205.13	163.07	100.53	51.29	510.02
35	Theodore P. Kane	51.11	14.10	54.72	53.10	16.00	6.04	7.77	7.73	210.57	148.21	97.94	51.89	509.11

* Completed four years' course "with distinction."
b Completed four years' course "with credit."
c Resigned.

*** Completed four years' course "with distinction."**

Completed four years' course "with credit."

Resigned.

24	George G. Mitchell.....	46.07	14.65	55.08	37.18	9.43	6.10	13.00	14.70	8.01	18.80	223.01	156.11	108.21	52.24	540.37
25	Ben H. Fuller.....	47.94	13.65	58.50	40.56	9.88	5.80	16.00	14.85	8.23	8.67	223.62	151.21	109.73	55.70	540.35
26	Charles A. Brand.....	48.28	15.90	53.28	35.36	9.75	5.80	14.70	13.95	8.73	12.80	218.55	160.71	107.73	63.77	539.76
27	Philip Williams.....	49.30	12.75	53.46	34.97	8.52	6.20	13.30	12.85	8.16	12.13	211.64	159.85	104.42	57.47	535.88
28	Robert E. Carney.....	51.34	17.15	51.84	35.49	8.25	6.10	11.40	13.85	8.43	14.58	218.38	151.90	104.02	55.47	522.77
29	Warren J. Terhune.....	44.88	14.15	49.86	33.93	7.74	5.80	12.30	12.05	8.67	7.20	198.58	156.83	111.81	58.98	537.19
30	Robert McF. Dutton.....	44.20	14.45	50.94	32.11	8.37	5.60	12.65	13.00	8.70	12.67	202.69	148.92	107.65	54.29	512.55
31	William K. Harrison.....	43.35	14.30	48.78	34.56	8.49	5.80	13.35	12.80	7.98	15.47	205.40	150.68	101.71	52.70	510.49
32	George W. Kirk.....	43.84	14.45	46.26	33.23	8.13	5.60	12.80	13.05	7.50	12.40	197.31	146.82	103.87	54.23	507.23
33	Julius Prochazka.....	43.69	15.95	46.00	34.84	8.94	6.50	12.90	12.90	7.89	17.87	206.48	147.21	98.68	51.74	508.51
r34	Ernest B. Anderson.....	43.35	13.20	45.00	33.67	8.73	5.90	12.55	11.85	8.22	16.27	198.74	146.89	97.76	50.91	498.80
35	George L. Fermier.....	47.26	17.20	45.90	32.89	9.09	6.90	12.50	13.35	0.00	0.00	185.09	146.94	106.78	51.88	492.19

* Completed four years' course "with distinction."

b Completed four years' course "with credit."

r Reassigned.

Merit-roll of naval cadets, second class, 40 members, annual examination, June, 1889.

Order of annual merit.	NAME.	Astronomy, navigation, and surveying.	Steam-machinery, marine engines, and boilers.	Practical work in steam- engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Conduct.	Aggregate.
	Maxima	12	48	12	60	48	20	16	12	224
1	Thomas F. Euhn	9.69	41.64	10.05	52.35	42.36	17.75	12.52	9.00	186.36
2	Lawrence Spear	9.90	39.48	9.87	51.00	41.68	17.75	12.32	9.00	182.80
3	Noah T. Coleman	9.90	39.84	9.87	49.50	40.32	16.70	14.01	6.42	186.59
4	Frank A. Schofield	10.08	39.84	10.22	41.55	41.70	17.50	12.76	9.84	184.65
5	Urban T. Holmes	9.03	38.16	10.17	49.40	36.84	15.00	13.80	7.68	181.08
6	John V. Chase	9.24	34.24	10.24	47.10	37.92	16.85	13.00	7.56	180.78
7	Alonso Gartley	8.54	34.48	10.14	50.70	34.56	13.70	14.92	5.88	177.76
8	Cleland Davis	8.65	35.52	9.99	43.40	37.20	17.00	14.40	7.08	178.54
9	Henry G. Ziegemeier	9.06	33.48	10.14	41.40	36.72	17.20	12.80	10.44	171.24
10	Matt. H. Signor	9.18	33.24	9.93	50.10	37.80	17.35	12.32	6.60	169.62
11	Montgomery M. Taylor	8.37	36.24	10.32	40.05	34.32	17.25	14.16	5.46	168.17
12	Claude B. Price	8.28	38.04	9.57	38.10	33.72	15.85	12.52	9.06	166.04
13	Frank B. Sullivan	8.62	35.52	9.27	42.45	35.76	14.45	13.12	6.24	165.61
14	John M. Blankenship	8.10	34.68	10.08	37.40	33.12	14.65	14.88	10.38	163.57
15	Lawrence H. Moses	8.55	33.72	8.56	43.20	36.00	16.25	10.64	4.38	163.29
16	George W. Williams	9.00	34.08	9.36	41.40	34.92	15.95	12.08	5.16	161.95
17	Charles O. Bond	8.46	32.52	10.17	39.90	34.20	14.45	12.84	8.62	161.06
18	William H. Buck	8.19	32.04	10.04	37.80	34.44	15.65	12.44	9.90	160.54
19	Albertus W. Catlin	8.94	31.56	10.32	40.05	33.72	14.45	12.60	7.08	159.31
20	Claude Bailey	7.80	33.24	9.87	40.95	31.44	15.25	12.16	8.26	158.99
21	Cyrus L. Radford	7.66	33.36	9.87	39.00	31.92	12.65	12.72	10.20	158.80
22	Henry S. Ritter	7.71	31.56	9.63	36.70	31.32	14.45	12.64	12.00	156.01
23	Thomas C. Traskwell	8.56	32.64	9.21	38.10	24.08	15.10	11.64	7.92	157.27
24	William A. Snow	7.11	30.00	10.14	40.05	30.64	14.70	14.04	10.36	157.26
25	Wendell C. Neville	7.80	31.80	9.60	37.65	31.68	15.30	13.04	10.20	156.49
26	Lav H. Everhart	7.97	34.44	9.60	37.80	31.32	12.55	12.76	4.34	155.73
27	Julius L. Latimer	8.40	32.00	9.78	38.70	32.04	14.05	10.76	7.92	155.25
28	Lucius C. Bootwick	8.01	35.16	9.64	37.20	33.60	12.96	13.04	4.06	154.83
29	John H. Dayton	8.48	32.52	9.72	39.15	33.00	14.55	10.96	4.04	152.68
30	William A. Moffett	7.35	30.24	10.22	36.90	29.28	14.65	12.56	10.56	152.26
31	Doctor F. Dismukes	8.01	20.36	9.81	38.55	31.92	13.35	12.00	7.62	151.62
1	Charles H. McVay	7.41	31.32	9.99	36.30	30.64	16.95	13.04	11.10	150.85
1	Charles T. Vogelgraag	7.95	31.44	10.36	26.10	33.68	17.45	12.52	10.14	150.61
1	Erwin H. McDonald	7.05	34.56	9.78	36.00	32.16	15.65	12.34	4.32	151.76
1	Franklin S. Rising	7.68	30.24	9.93	36.60	31.32	14.70	13.73	6.78	151.69
1	John R. Edie	6.00	28.56	9.78	38.10	28.80	17.10	13.44	7.50	149.24
1	Frederick L. Eaton .....	.....	.....	.....	.....	.....	.....	.....	9.24	.....
1	Frank H. Kochersperger .....	.....	.....	.....	.....	.....	.....	.....	11.62	.....
1	Eugene D. Ryan .....	.....	.....	.....	.....	.....	.....	.....	9.72	.....
1	William T. Saunders .....	.....	.....	.....	.....	.....	.....	.....	6.00	.....

1 Sick turned back to next lower class.

Merit-roll of naval cadets, third class, 61 members, annual examination, June, 1889.

Ord	NAME	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Conduct.	Aggregate.
		48	24	24	24	24	8	152
*1	Frank B. Zahn	47.88	21.60	22.50	22.44	23.04	7.36	144.82
*2	Horatio G. Gillmor	48.12	21.48	22.62	21.78	21.54	7.01	142.55
*3	Richard M. Watt	45.48	19.74	20.52	20.76	21.24	7.62	135.36
*4	Henry G. Smith	48.12	20.40	20.40	21.60	20.52	7.20	135.24
*5	Reginald R. Belknap	40.32	19.56	21.72	22.74	22.44	6.75	133.53
*6	Daniel B. Nide	41.16	18.60	21.72	21.66	23.88	6.02	133.04
*7	John H. Rowen	46.68	19.50	17.64	18.86	24.84	5.15	130.67
*8	De Witt Blamer	46.20	19.56	19.86	19.02	20.10	5.31	130.05
*9	Clark D. Stearns	38.64	19.32	21.12	21.60	21.84	7.26	129.78
*10	Edwin T. Pollock	40.20	19.26	21.24	21.84	19.98	7.10	129.62
11	Henry C. Kuenzli	39.00	18.18	21.78	21.90	21.36	5.76	127.98
12	Harley H. Christy	40.32	18.42	20.58	19.02	20.58	7.36	126.28
13	Lucien G. Smith	36.72	19.02	21.84	20.58	20.22	7.07	125.45
14	Henry H. Hough	33.84	16.56	19.98	24.48	22.50	7.26	124.62
15	Albert S. McLemore	35.52	19.32	21.12	23.70	19.98	4.54	124.18
16	Milton E. Reed	34.80	18.84	20.52	19.32	23.04	7.58	124.10
17	Arthur L. Willard	34.08	20.70	22.44	21.24	18.00	6.98	123.44
18	John G. F. Moale	33.00	17.70	19.26	21.30	24.18	6.78	122.23
19	Charles F. Preston	38.52	18.12	17.94	18.96	20.76	7.17	121.47
20	Renwick J. Hartung	37.08	18.36	19.32	17.94	20.16	6.98	119.84
21	Noble E. Irwin	39.96	17.82	17.76	18.92	20.88	5.41	118.75
22	Waldo Evans	36.48	18.84	18.30	18.06	20.10	6.46	118.24
23	Charles R. Emrich	36.24	19.20	19.26	18.78	20.46	3.71	117.65
24	William H. McGrann	34.56	16.74	20.88	19.68	19.26	5.47	116.50
25	Bion B. Bierer	34.08	18.60	19.06	17.70	19.02	6.56	115.04
26	Robert L. Flowers	35.04	17.34	18.60	18.72	18.12	6.40	114.23
27	Richard H. Leigh	35.88	16.68	17.88	16.74	19.08	7.23	113.49
28	Jay H. Sypher	32.28	17.94	19.86	18.18	18.96	5.25	112.47
29	William D. Brotherton	33.60	16.14	18.66	17.88	19.92	5.54	111.74
30	Irving Blount	33.60	16.62	18.18	18.30	17.76	7.20	111.66
31	Archibald Anthon	31.20	16.66	17.70	21.30	21.24	3.04	111.34
32	James F. Carter	31.56	16.74	20.16	17.88	17.76	6.37	110.47
33	Adelbert Althouse	32.64	16.14	17.22	17.10	20.28	6.88	110.26
34	Harry H. Caldwell	31.08	17.40	18.66	19.14	18.86	5.57	110.21
35	George H. Shepard	31.32	18.30	20.04	20.10	17.76	2.50	110.02
36	Rufus H. Lane	31.80	18.90	18.48	17.34	18.72	4.77	110.01
37	Dion Williams	30.60	17.22	19.98	17.64	20.76	3.71	109.91
38	William H. Ford	30.48	15.66	17.34	18.90	19.68	6.85	108.91
39	William M. McKelvy	30.96	15.72	18.66	18.00	18.42	6.56	108.32
40	Harry E. Smith	32.40	16.50	16.44	15.90	21.54	5.38	108.16
41	Thomas J. Senn	35.04	15.96	19.14	16.68	15.84	5.18	107.84
42	Edward Trickle	30.96	15.18	17.34	17.58	19.86	6.82	107.74
43	George Richards	32.40	17.94	15.96	16.32	20.52	3.07	106.91
44	John T. Myers	30.48	15.66	18.60	16.74	18.84	3.81	106.44
45	George W. Laws	31.56	16.26	17.70	17.58	18.18	2.50	106.11

Merit-roll of naval cadets, third class, 61 members, etc.—Continued.

Order of annual merit.	Name.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Cadet.	Aggregate
		45	24	21	24	24	4	
46	David V. H. Allen	31.68	16.20	17.82	18.68	16.14	2.20	103.70
47	Elisha Theall	30.48	15.30	16.14	16.38	19.08	4.00	102.37
48	Charles W. Lyle	30.72	16.26	17.52	15.48	16.68	5.06	102.32
49	Hornoe G. Macfarland	31.92	17.16	18.36	17.16	15.84	1.31	101.69
50	Edward G. Russell	31.08	16.14	17.40	16.28	16.80	2.74	101.54
51	Louis H. Gross	31.68	16.50	17.10	17.04	16.62	2.40	101.34
52	Roby Robinson	31.60	16.06	15.72	15.90	16.92	3.67	100.29
53	William W. Beck	30.60	15.06	15.00	15.42	18.00	2.56	97.24
	: Sullivan T. Sparkman	29.16	16.62	19.32	19.86	18.54	6.83	110.63
	: Louis J. Marshall	30.60	14.76	19.02	19.26	19.20	4.70	107.54
	: Chester Wells	29.04	16.08	19.26	16.26	17.40	4.22	102.26
	: Bernard H. Camden	33.00	14.18	16.98	16.08	17.70	2.82	100.74
e	Kaga K. Nire	24.44	12.36	15.78	13.02	20.22	4.83	100.65
	: Thomas T. Kellogg	29.52	15.06	16.32	16.50	17.64	2.75	97.79
	: William J. Reese	29.76	14.40	16.44	16.26	16.38	6.83	94.67
e	John K. Robinson						6.08	

e Absent, sick; continued with class, subject to examination.

c Continued with class.

r Resigned.

MERIT-ROLL—FOURTH CLASS.

Merit-roll of naval cadets, fourth class, 64 members, annual examination, June, 188

Order of annual merit.	NAME.	English and history.	Algebra and geometry.	French, Spanish, and German.	Conduct.
	Maxims	24	24	24	4
*1	John D. Beuret	21.72	24.54	22.38	3.24
*2	Frederick A. Traut	19.26	21.84	24.12	3.44
*3	William C. Dawson	22.44	19.02	23.82	3.07
*4	Homer L. Ferguson	21.60	21.00	22.14	3.48
*5	Charles T. Jewell	20.52	22.32	21.06	2.50
*6	Luke McNamee	21.30	20.46	20.58	3.51
*7	George C. Day	21.06	22.44	19.02	3.23
8	Joseph E. McDonald	18.90	22.14	18.00	3.61
9	John R. Y. Blakely	18.78	21.24	19.38	3.08
10	Frederick L. Sawyer	21.54	17.84	19.32	3.81
11	Joseph R. Campbell	20.28	18.72	19.68	3.01
12	Aaron L. Gamble	20.76	17.58	19.44	2.91
13	Arthur Rice	18.24	18.30	20.28	3.73
14	Leon S. Thompson	17.88	17.58	21.18	3.87
15	Robert K. Crank	18.60	17.10	21.84	2.89
16	Emmett R. Pollock	19.20	16.56	22.02	2.64
17	Holden A. Evans	20.04	18.84	17.82	3.67
18	Charles L. Hussey	19.98	18.66	18.30	3.23
19	Theodore H. Low	19.28	19.68	18.12	2.44
20	Thomas L. Stitt	19.98	16.56	19.26	3.67
21	Powers Symington	19.14	16.84	20.88	3.18
22	John F. Hines	18.06	18.72	18.00	3.80
23	Charles Allen	18.00	17.70	19.86	3.00
24	Frederick W. Stopford	18.00	17.62	21.30	1.17
25	Edgar K. Arison	17.88	16.32	21.78	1.91
26	Thomas S. Borden	19.02	16.48	20.88	2.48
27	Gregory C. Davison	18.00	19.38	16.68	3.19
28	Washington D. Gibbs	16.26	20.70	18.12	2.66
29	Joel R. P. Pringle	17.22	15.72	21.48	3.20
30	James Sheehan	16.26	17.58	20.04	3.39
31	Ralph C. Chadbourne	20.46	15.00	17.88	3.73
32	Benjamin B. McCormick	19.32	15.12	18.66	3.49
d33	Herbert E. McReavy	17.64	15.48	20.28	3.12
34	Howard W. Huntington	19.20	16.92	17.04	3.35
35	Rozier B. Larkin	18.18	15.78	21.36	1.05
36	George Wedekind	18.24	16.56	17.70	3.52
37	Joseph C. Breckinridge	20.22	16.26	18.48	0.79
38	William E. Hoblitzelle	17.76	18.20	17.94	3.81
39	Beriah E. Jones	17.46	16.50	18.30	3.44
40	Yates Stirling, Jr	16.86	17.70	19.08	1.83
41	Fred R. Payne	18.78	17.04	18.30	1.11
42	Handolph Ridgely	18.66	16.62	17.40	2.87
43	John H. Russell, Jr	16.80	16.68	17.34	3.67
44	Leonard Goodwin	16.62	15.18	19.74	2.89
45	Joseph C. Kilbourne	17.52	16.02	18.66	2.01

d Dismissed.

Merit-roll of naval cadets, fourth class, 64 members, etc.—Continued.

Order of annual merit.	NAME.	English and history.	Algebra and geometry.	French, Spanish, and German.	Conduct.	Aggregate.
	Maxima	24	24	24	4	76
46	John Curlett	17.40	15.00	18.12	3.08	54.20
47	Austin B. Davis	15.08	18.24	18.48	1.80	54.18
48	George H. Mather	17.10	18.72	17.34	3.03	53.25
49	Raymond De L. Hasbrouck	17.40	16.44	16.80	3.05	53.69
50	Walter Hall	16.74	16.62	17.28	2.73	53.37
51	Stanley P. Dennett	16.86	16.32	16.98	3.17	53.33
52	George Mallison	17.76	15.78	17.34	2.45	53.33
53	John S. Porter	17.22	16.86	17.04	1.97	53.09
54	Raymond B. Swigart	16.26	15.60	17.46	3.00	52.01
55	Charles F. Macklin	15.72	16.44	17.34	3.23	52.73
56	Philip M. Bannon	16.44	15.18	16.80	3.44	51.92
57	Josiah G. Sawyer	16.50	15.00	16.02	3.83	51.35
58	Edward S. Kellogg	15.78	16.14	15.00	3.76	50.68
†	Christian C. H. Zillman	18.84	14.64	17.70	2.48	54.66
†	Warren Rodney	18.12	14.28	18.12	2.31	53.83
†	Charles T. Pollard, Jr	17.16	14.28	19.08	2.11	53.63
†	Stanford E. Moses	16.20	18.14	16.74	3.00	49.78
†	Rollin R. Nevitt	16.56	14.46	14.70	3.32	49.05
†	William V. Logan	8.58	7.88	8.46	3.27	27.69

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *Naval Cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one Naval Cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.)

III. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

IV. Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be not less than fifteen nor more than twenty years of age, and physically sound, well-formed, and of robust constitution.—(*Rev. Stat.*, § 1517, and act of Congress approved March 2, 1889.)

V. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examinations shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."—(*Rev. Stat.*, § 1515.)

~~NOTE.—"Section 1515 is to be read as if the dates fixed by the regulations of the academy for the examination of candidates for admission were inserted therein; and hence, by the existing law, the season for recommendations and nominations of naval cadets begins after the 5th of March and expires on the 30th of September in each year."~~—(*Op. xvi*, p. 601.)

VI. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

VII. "Naval Cadets found deficient at any examination shall not be continued at the Academy or in the service unless upon the recommendation of the academic board."—(*Rev. Stat.*, § 1519.)

VIII. "The academic course of *naval cadets* shall be six years."—(*Rev. Stat.* § 1520.)

IX. Candidates who may be nominated in time to enable them to reach the academy by the fifteenth of May will receive permission to present themselves on that date to the superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the academy immediately after passing the prescribed examinations.

No leaves of absence will be granted to Cadets of the fourth class.

EXAMINATION.

X. Candidates will be examined physically by a board composed of three medical officers of the navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate; viz.,

Feeble constitution, inherited or acquired;

Retarded development;

Impaired general health;

Decided cachexia, diathesis, or predisposition to disease;

Any disease, deformity, or result of injury that would impair efficiency; such as—

Weak or disordered intellect;

Cutaneous or communicable disease;

Unnatural curvature of spine, torticollis, or other deformity;

Inefficiency of either of the extremities or large articulations from any cause;

Epilepsy or other convulsions within five years;

Impaired vision, disease of the organs of vision, imperfect color sense;

Impaired hearing or disease of the ear;

Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;

Impediment of speech to such an extent as to impair efficiency in the performance of duty;

Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;

Hernia or undescended testis;

Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;

Disease of the genito-urinary organs;

Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or concrete, and to use with facility the tables of money, weights, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon and the relation between the Troy and Avoirdupois pounds and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem which can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the uses of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea, valley, basis, stratum, bandit*.

The second division will contain one or more sentences to be parsed; e. g.,

"*They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they ought.*" Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words; thus,—

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected; thus,—

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to h*

born there and seen it. 5. *There's a sweet little cherubim sits up aloft to keep watch for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: the definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain-chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they empty; the position of important seas, bays, gulfs, and arms of the sea; the position of independent states, their boundaries and capital cities; the position and direction of great peninsulas and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands, and colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bodies of water on which cities are situated; the course of a vessel in making a voyage between well known sea-ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other states, and with reference to latitude and longitude, of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the United States as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the United States, and give their positions. When and by whom were these settlements made?
2. Explain the three forms of government in the colonies: royal, proprietary, and charter. Name the colonies that originally existed within the present limits of Massachusetts; of Connecticut. When were these colonies united? What did the colony of Pennsylvania include? When was it divided?
3. State the leading events of the colonial wars, and give the results of each war.
4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the United States, giving the names of commanding officers and stating the results of the battles.
5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates who pass the physical and mental examinations will receive appointments as naval cadets, and become students at the academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States navy eight years (including his time of probation at the naval academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles; viz.,

One dress jacket	\$21.50	One hand-glass	\$0.45
One blouse	12.50	One jack-knife .....	.70
Two pairs trousers	23.00	Six sheets	3.42
Two working suits	1.86	Hammock clews .....	.40
One overcoat	23.50	One pair of bathing trunks .....	.20
One rubber coat	4.25	Three pairs of white thread gloves .....	.60
One rubber hat .....	.53	Two black silk neckties .....	.66
Two pairs of regulation leggins	1.44	Two clothes bags .....	.42
One parade cap	2.55	One hammock mattress	2.85
One knit cap .....	.66	<i>a</i> One requisition book .....	.40
One mug .....	.09	<i>a</i> One pass book .....	.40
One soap box .....	.62	<i>a</i> Stencil, ink, and brush .....	.45
One laundry book .....	.34	<i>a</i> One bottle of indelible ink .....	.18
One pair of blankets	3.00	<i>a</i> One wash basin and pitcher .....	.97
Two pairs of high shoes	7.50	<i>a</i> One pair of gymnasium slippers .....	.85
One pair of overshoes .....	.53	*One whisk brush .....	.13
Eight white shirts	8.00	*One coarse comb .....	.11
Twelve linen collars	2.04	*One cake of soap .....	.10
Eight pairs of cuffs	2.00	*One hair brush .....	.50
*Eight pairs of socks	1.84	*Stationery .....	.50
*Eight towels	1.84	*Twelve white handkerchiefs	2.52
*Shaving outfit	1.47	*One pair of suspenders .....	.36
*Four pairs of drawers (winter)	4.00	*Four night shirts	2.52
<i>b</i> Four pairs of drawers (summer)	1.60	*One tooth brush .....	.20
*Four undershirts (winter)	4.00	*Thread and needles .....	.15
<i>b</i> Four undershirts (summer)	1.60	*Blacking brush and blacking .....	.39

When moving into cadet quarters, cadets will supply themselves with the following articles; viz.,

<i>a</i> Two bedspreads	\$2.84	<i>a</i> One rug	\$0.90
<i>a</i> Two pairs of drill gloves	1.00	<i>a</i> One hair mattress	5.10
<i>a</i> One slop jar .....	.90	<i>a</i> One straw mattress	1.32
<i>a</i> Two spatter-cloths .....	.66	<i>a</i> One broom .....	.25
One hair pillow .....	.75	Six pillow cases	1.38
One mirror	1.31		

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice-ship; viz.,

Three working suits	\$2.79	One pair of rubber leggins	\$0.65
Four woolen shirts	7.00	One pair of high shoes	3.75
Three white sailor hats	1.20	One knit cap .....	.66

Articles marked *a* will not be taken on board the practice-ship.

Of the articles marked *b* cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the store-keeper.

Each naval cadet must on admission deposit with the pay-officer the sum of \$20, for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the academy.

ADMISSION OF CANDIDATES.

SUMMARY OF EXPENSES.

Deposit for clothing	\$169. 10
Deposit for books, etc	20. (10)
Total amount required	189. 10

The value of clothing brought from home is to be deducted from this amount.

Each naval cadet *one month after admission* will be credited with the amount of his actual expenses in travelling from his home to the academy.

XIV. A naval cadet who voluntarily resigns his appointment within a year of the time of his admission to the academy will be required to refund the amount paid him for travelling expenses.

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
English Studies, History, and Law.	1	4	ENGLISH LITERATURE: Themes, lectures.	Shakespeare's Julius Caesar, Rolfe's edi- tion.
Modern Languages.	2	4	FRENCH: Continuation of first term course. SPANISH: Continuation of first term course. GERMAN: Continuation of first term course.	Same as first term.
Mechanical Drawing.	2½	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, gearing, and details of guns, machinery, and engines; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.	Tomkin's Machine Construction and Drawing.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
<i>Steam Engineering.</i>	3	4	MARINE ENGINES AND BOILERS: Explanation of all the parts of an engine; types of engines; steam valves and other valves; generation of steam; distribution and expansion of steam; screw propellers and side wheels; the indicator and its diagrams; the power of an engine and computations relating to it; hydrometers; saturation; scale and its prevention; casualties; boilers; materials; combustion; transfer of heat; testing steam-engines; the principles of mechanism.	Bennett's Marine Steam-Engine. Goodeve's Elements of Mechanism.
<i>Mechanics and Applied Mathematics.</i>	5	3	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves; centres of gravity; moments of inertia; planimeters; rules for the approximate determination of areas and volumes; differential equations.	Johnson's Integral Calculus. Johnson's Differential Equations.
<i>Physics and Chemistry.</i>	5	4	PHYSICS: Recitations on simple harmonic motion, wave motions, sound, light, and heat. Practical work in the physical laboratory, experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses, length of light waves. Photography. CHEMISTRY: Short course in chemical analysis.	Daniell's Principles of Physics. Ganot's Physics. Stewart's Treatise on Heat. Practical Physics, by Stewart and Gee. Kohlrausch's Physical Measurements. Lecture Notes.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Professional French Reader. Holloway's Pocket Dictionary. Sauveur Petite Grammaire.
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Sketching machinery and making working drawings; making tracings and blue prints of drawings perspective.	Tomlin's Machine Construction and Drawing.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; different units of time and calendars; the moon; tides; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	White's Astronomy; Chauvenet's Spherical and Practical Astronomy; Bowditch's Navigator; American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	2½	4	Course for first term continued.	
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations in light and heat concluded. Electricity and magnetism commenced. Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.	Same as first term, and Thompson's Electricity and Magnetism. Ayrton's Practical Electricity. Day's Exercises in Electrical Measurements. Lecture Notes.
<i>Modern Languages.</i>	1	1½	FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.	Same as first term. French newspapers, and books of first term as reference books.

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Seamanship, Naval Construction, and Naval Tactics.	4	4	<p>SEAMANSHIP: Uses of compass, lead, log, and sounding machines; principles of marlinespike seamanship, including cutting, fitting, and reefing rigging; description and uses of sails, their fittings and appliances; stowage and organization; management of boats; handling sails; management under sail and under steam; turning and maneuvering, wharfing, docking, towing, piloting, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; control of behavior among waves, and performance in general.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of ship-building in wood, iron, and steel; systems of construction subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship, section and squadron; evolutions of the fleet; signaling by Army and Navy (English Morse) code, Navy and International codes of flag signals.</p>	<p>Luce's Seamanship. Special Notes and Drawings. Navy Department Pamphlets. White's Manual of Naval Architecture. Thearle's Naval Architecture. Thearle's Theoretical Naval Architecture. Navy and International Signal Books. First Drill Book. Navy Department</p>
Ordnance and Gunnery.	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat-howitzers and machine-guns afloat and on shore; landing of cannon and marines.</p>	<p>Ordnance Instructions. Text book of Ordnance and Gunnery (Naval Academy publication).</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
<i>Ordnance and Gunnery.</i>			<p>INFANTRY TACTICS: School of the soldier; school of the company; school of the battalion; instruction for skirmishers.</p> <p>GUNNERY: The motion of projectiles in a non-resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Upton's Tactics.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>Exterior Ballistics (Naval Academy publication).</p> <p>Ordnance Notes, Office of Naval Intelligence.</p>
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; the use of instruments, especially those for determining terrestrial latitudes and longitudes; different units of time; calendars; the moon; tides; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.</p> <p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p>	<p>White's Astronomy.</p> <p>Chauvenet's Spherical and Practical Astronomy.</p> <p>Bowditch's Navigator.</p> <p>American Ephemeris and Nautical Almanac.</p> <p>Bowditch's Navigator.</p> <p>Navigation arranged as a text-book for the U. S. Naval Academy.</p>
<i>Mechanics and Applied Mathematics.</i>	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS: Elasticity; stress and strain; theory of structures; strength and deflection of beams; beams of uniform resistance.	Cotterill's Applied Mechanics.
<i>Physics and Chemistry.</i>	2	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric-light wires; experiments upon induction; practice in photography and micro-photography.	<p>Same as second class year.</p> <p>Lecture Notes.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	5	4	Course of the first term continued.	
<i>Ordnance and Gunnery.</i>	5	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors which arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas of Noble and Abel connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>The Elastic Strength of Guns (Naval Academy publication)</p> <p>Interior Ballistics (Naval Academy publication).</p> <p>Accuracy and probability of Fire (Naval Academy publication).</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of the deviation, the determination of the vertical and horizontal forces of the earth and the ship, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle, and the mechanical correction of the deviation and the heeling errors. Navigation.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; levelling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of the map.</p>	<p>Howell's Theory of the Deviations of the Compass.</p> <p>Bayne's Elementary Manual for the Deviations of the Compass in Iron Ships.</p> <p>Chauvenet's Spherical and Practical Astronomy. *</p> <p>Hayden's Marine Surveying.</p> <p>Projection Tables.</p> <p>Nordhoffs <i>Handbook of Sailing.</i></p>
<i>English Studies, History and Law.</i>			9.3	
<i>Physiology and Hygiene.</i>	12	4	<p>PHYSIOLOGY AND HYGIENE: General description of the human body and its functions; hæmorrhage, its causes and methods of arrest; drowning, means of resuscitation therefrom; common accidents, measures to be adopted therein; ventilation, necessity for, and means of, in ships and houses; bathing, exercise, clothing; foods, digestibility of, methods of cooking; what the body requires and what it does not require; impure water, alcoholic drinks, tobacco, and other narcotics; their nature and their effects, in various amounts, on the human system; habits, their inheritance, formation, and correction; requisites for a healthy body and a sound mind; specific contagious diseases; lectures, notes, and illustrations.</p>	<p>Cutter's Comparative Physiology.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	2	4	NAVAL CONSTRUCTION: Definitions; history and practice of ship-building in wood, iron, and steel; systems of construction, subdivision and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and in the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities.	White's <i>Manual of Naval Architecture</i> . Thearle's <i>Naval Architecture</i> . Thearle's <i>Theoretical Naval Architecture</i> .
<i>Steam Engineering.</i>	2	4	MARINE ENGINES: General description of modern marine engines and their dependencies; expansion of steam; mean pressure; piston speed; size of cylinders; stroke and revolutions; types of pistons; detailed construction of parts of a cylinder, connecting rod, crosshead, crank shaft, line shaft, frames and journals, thrust bearing; twisting and bending moments; stern tube and bearings; types of condensers; details of construction; area of condensing surface; arrangement and efficiency of air, circulating, and feed pumps; details of size and construction; types of valves and valve gear; expansion valves and valve diagrams; propellers; theory, efficiency, and details of construction; the indicator and indicator diagrams; power of the engine with necessary calculations; materials used in the construction of machinery with reasons therefor.	Seaton's <i>Marine Engines</i> .
	3	4	DESIGNING MACHINERY: The strains to which machinery is subjected and the resistance offered to the strains; relative value of materials used in machinery; testing materials; principles and considerations governing the design, drawing, specifications, and proportioning of various parts of boilers and engines, with practical applications in the designing room.	Unwin's <i>Elements of Machine Design</i> . Shock's <i>Marine Boilers</i> .
	3	4	FABRICATION: Practical work in the machine shop.	

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mechanics and Applied Mathematics.</i>	3	4	Same as for line division.	
<i>Physics and Chemistry.</i>	3	4	Heat and Analytical Chemistry.	Same as for second class year. Lecture Notes.

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	5	4	Course of the first term continued.	
<i>Steam Engineering.</i>	2	4	MARINE ENGINES: Continuation of first term course. Physical properties of steam; convertibility of heat and work; theory of the steam-engine; air and heat engines; efficiency of an engine; theoretical considerations governing the expansion of steam; effects of clearance, wire drawing, jacketing, liquefaction and re-evaporation; experiments on the steam-engine, and the methods of determining its efficiency	Seaton's Marine Engine. Cotterill's Steam Engine Considered as a Heat Machine.
	3	4	BOILERS: Types and efficiency of marine boilers; combustion; fuel; evaporation; draught; construction of boilers in detail, and materials used in them; details of fitting and attachments; causes of deterioration; care and preservation of boilers.	Shock's Steam Boilers.
	3	4	DESIGNING MACHINERY: Continuation of first term course.	Unwin's Elements of Machine Design. Shock's Marine Boilers.
<i>Mechanics and Applied Mathematics.</i>	3	4	APPLIED MECHANICS: Kinematics and dynamics of machines; transmission and conversion of energy by fluids.	Cotterill's Applied Mechanics.
<i>Physiology and Hygiene.</i>	1½	4	Same as for line division.	

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics							4	5	2	3
Ordnance and Gunnery							3	5		
Astronomy, Navigation, and Surveying						2	4	4		
Steam engineering.....					3	3			3	0
Mechanics and Applied Mathematics					5	5	3		3	3
Physics and Chemistry				5 F	5	4	2		3	
Mathematics.....	6	5	5	5						
English Studies, History, and Law.....	5	5	4	1				7		
Modern Languages	5	5½	3	2	1 F	½ F				
Mechanical Drawing.....			4	2½	2	1				
Physiology and Hygiene.....								1½		1½

F, Friday, 7.30 to 9.30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM—1880 '90.

Departments.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Astronomy, Navigation, and Surveying.....	M. T. W. Th. F. (2)	M. F. S. (1), T. (3)		M. W. F. S. (1)	
English Studies, History, and Law.....	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)			
Mathematics.....		M. W. Th. F. (3)	T. (3), S. (1)		
Mechanical Drawing.....			M. T. W. Th. F. (1)	M. W. F. (2)	M. W. F. (2)
Mechanics and Applied Mathematics.....			M. (2), F. (7.30 to 9.30 p.m.)*		
Modern Languages.....	M. T. W. Th. F. (3)	T. W. Th. (1)		T. Th. (2), F. (3)	T. Th. F. (1)
Ordnance and Gunnery.....			M. (3), T. W. Th. F. (2)		M. W. (3)
Physics and Chemistry.....				M. T. W. Th. (3)	
Seamanship and Naval Construction.....					{ M. (1), T. (2) (3) } W. (1), Th. (2) (3), F. (3), S. (1)
Steam Engineering.....			W. Th. F. (3)		

SECOND TERM.

Astronomy, Navigation, and Surveying.....			W. F. (3)	M. T. Th. F. (1)	
English Studies, History, and Law.....		M. (1)		F. (7.30 to 9.30 p.m.)*	
Mathematics.....		M. T. W. Th. F. (2)			
Mechanical Drawing.....		T. Th. (3), S. (1)†	W. (2)		
Mechanics and Applied Mathematics.....			M. T. W. Th. F. (1)		M. T. Th. (2)
Modern Languages.....		W. F. (3)	S. (1)†, F. (7.30 to 9.30 p.m.)*		
Ordnance and Gunnery.....				M. T. W. Th. F. (2)	
Physics and Chemistry.....		{ M. (3), T. W. Th. F. (1), F. (7.30 to 9.30 p.m.)* }	M. T. Th. F. (2)		
Physiology and Hygiene.....				W. (3), S. (1)†	W. (3), S. (1)†
Seamanship and Naval Construction.....				M. T. Th. F. (3), W. (1)	M. F. (3), W. (1)
Steam Engineering.....			M. T. Th. (3)		{ M. (1), T. (1) (3), W. (2), Th. (1) (3), F. (1) (3), F. (7.30 to 9.30 p.m.)* }

* Lectures and practical instruction.

† Saturday period, second term, from January 31 to March 10.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics							4	5	2	3
Ordnance and Gunnery							2	5		
Astronomy, Navigation, and Surveying						2	4	4		
Steam engineering.....					3	3			3	5
Mechanics and Applied Mathematics.....					5	5	2		3	3
Physics and Chemistry				5 F	5	4	2		3	
Mathematics.....	6	5	5	5						
English Studies, History, and Law....	5	5	4	1				F		
Modern Languages	5	5½	3	2	1 F	½ F				
Mechanical Drawing.....			4	2½	2	1				
Physiology and Hygiene.....								1½		1½

F, Friday, 7.30 to 9.30 p. m.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact co-efficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors.

TABLE OF CO-EFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>									
Seamanship, Ship Building, and Naval Tactics.....				17	9		26	36	33
Cruise Reports, Navigation Note Books, Journals, and Station Bills.....								24	36
Practice Cruises.....				5		88			
<i>Ordnance and Gunnery.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery.....				18		72		44	
Ordnance and Gunnery.....									
<i>Astronomy, Navigation, and Surveying.</i>									
Astronomy, Navigation, and Surveying....			3	13			13	44	
Practice Cruises.....				3		76			
<i>Steam Engineering.</i>									
Steam Machinery, Marine Engines, and Boilers.....			12					20	
Summer Practical Work.....			3		6	60			
Marine Engines.....					10				46
Designing Machinery.....					13				
Fabrication.....					6				
Boilers.....					7		228		56
<i>Mechanics and Applied Mathematics.</i>									
Differential and Integral Calculus, and Mechanics.....			15						
Least Squares and Strength of Materials.....				5	5	80			
Mechanics.....					6		104		
<i>Physics and Chemistry.</i>									
Chemistry and Physics.....		6			6				
Physics.....			12						
Physics.....				5		92	96		
<i>Mathematics.</i>									
Algebra and Geometry.....	6								
Trigonometry, Analytical Geometry, and Descriptive Geometry.....		12				72	72		
<i>English Studies, History, and Law.</i>									
English and History.....	6								
English, History, and Law.....		6		2		56	48	34	
<i>Modern Languages.</i>									
French, Spanish, and German.....	6	6	5			68	68	28	28
<i>Mechanical Drawing.</i>									
Mechanical Drawing.....		6	4			40	40		
<i>Miscellaneous.</i>									
Physiology and Hygiene.....				3	3	12	12		
Conduct.....	1	2	3	5	5	44	44		
Maxima for each class.....	76	152	228	304	304	760	760	340	340
Deduction for each demerit.....	0.013	0.022	0.030	0.123	0.133				

*In making up the standing for a year the second term is given double the weight of the first term.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spare; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

School of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, mortars, boat howitzers, and machine guns; target practice with small-arms; target practice with mortars; target practice afloat with machine guns, rifled howitzers, and great guns; small-sword exercise; broad-sword exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the drift; application of photography to ordnance purposes; the preparation and inspection of ordnance material.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact co-efficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Academic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company (4).	Company (4).	Target great guns(4).	Steam tactics (4).
	2	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battery (4).	Battery (4).	Steam tactics (4).	Target great guns (4).
	4	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Nov....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns(4).	Steam tactics (4).	Company (4).	Company (4).
	3	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Dec....	1	Steam tactics (4).	Target great guns(4).	Battery (4).	Battery (4).
	2	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battal'n infantry(4).	Battal'n infantry(4).	Battal'n infantry(4).	Battal'n infantry(4).
	4	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Jan....	1	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	2	Broadsword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Broadsword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Broadsword.	Steam.
Feb....	1	Steam.	Practical ordnance.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.

SEMI-ANNUAL EXAMINATION.

Feb....	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
Mar....	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Devlat'n compass(4).	Devlat'n compass(4).	Devlat'n compass(4).	Devlat'n compass(4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
April	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns(4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target great guns(4).	Torpedoes (4).	Steam tactics (4).
May...	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns(4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
June 1st to 10	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	3	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	4	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
June 10 to Aug 25	5	General quarters (2).	General quarters (2).	General quarters (2).	General quarters (2).
	6	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	7	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	8	General quarters.	General quarters.	General quarters.	General quarters.
Sept....	9	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	10	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	11	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	12	Seamanship.	Seamanship.	Seamanship.	Seamanship.

ANNUAL EXAMINATION.

June 10 to Aug 25	Practice cruise.
Sept....	On leave

SECOND CLASS.

Aca- demic Months.	Weeks	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Pivot guns.	Steam launches.
	2	Battery.	Battery.	Steam launches.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Steam launches.	Company.	Company.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Pivot guns.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
	4				
Jan.....	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
	5	SEMI-ANNUAL EXAMINATION.			
Feb.....	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
Mar.....	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
April....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Target machine guns (4).
	3	General quarters (1). Skirmish (4).	General quarters (1). Target great guns (4).	General quarters (1). Target machine guns (4).	General quarters (1). Steam tactics (4).
	4	Seamanship (1). Steam tactics (4).	Seamanship (1). Target machine guns (4).	Seamanship (1). Target great guns (4).	Seamanship (1). Skirmish (4).
May.....	1	Seamanship (1). Target machine guns (4).	Seamanship (1). Steam tactics (4).	Seamanship (1). Skirmish (4).	Seamanship (1). Target great guns (4).
	2	General quarters (1). Battal'n infantry (4).	General quarters (1). Battal'n infantry (4).	General quarters (1). Battal'n infantry (4).	General quarters (1). Battal'n infantry (4).
	3	Seamanship (1). Battal'n artillery (2).	Seamanship (1). Battal'n artillery (2).	Seamanship (1). Battal'n artillery (2).	Seamanship (1). Battal'n artillery (2).
	4	Seamanship (3). Steam tactics (3).	Seamanship (3). Steam tactics (3).	Seamanship (3). Steam tactics (3).	Seamanship (3). Steam tactics (3).
	5	General quarters (2). Battalion infantry.	General quarters (2). Battalion infantry.	General quarters (2). Battalion infantry.	General quarters (2). Battalion infantry.
(Fifth week.)	M.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	T.	General quarters.	General quarters.	General quarters.	General quarters.
	W.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10 }	--	ANNUAL EXAMINATION.			

SECOND CLASS.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	1	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Signals p. m.	Machine-shop a. m. Target howitzers p. m.
	2	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.	Machine-shop a. m. Signals p. m.
	3	Machine-shop a. m. Signals p. m.	Machine-shop a. m. Target howitzers p. m.	Machine-shop a. m. Target machine-guns p. m.	Machine-shop a. m. Howitzers afloat p. m.
	4	Running steam cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine-guns p. m.
	5	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
	6	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Target small arms p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.
	7	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Target small arms p. m.	Machine-shop a. m. Boats p. m.
	8	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.	Machine-shop a. m. Target small arms p. m.
	9	Machine-shop a. m. Target small arms p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Steam tactics p. m.	Machine-shop a. m. Target great guns p. m.
	10	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.	Machine-shop a. m. Boats p. m.
Sept	1	On leave.	On leave.	On leave.	On leave.
	2				
	3				
	4				

THIRD CLASS.

Academic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Pivot guns.	Boats.
	2	Battery.	Battery.	Boats.	Pivot guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Pivot guns.	Boats.	Company.	Company.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Pivot guns.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
Jan.....	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Broadside guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Broadside guns.
	4	Broadside guns.	Rigging loft.	Small sword.	Target small arms.
	5	SEMI-ANNUAL EXAMINATION.			
Feb.....	1	Target small arms.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
Mar.....	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).	Pivot guns (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April....	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target sm'll arms(4).	Skirmish (4).	Seamanship (4).	Boat (4).
	4	General quarters(1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target sm'll arms(4).	Boats (4).	Seamanship.
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Skirmish (4).
	7	Seamanship.	Boats (4).	Target sm'll arms(4).	Seamanship (1).
May.....	1	Boats (4).	Seamanship (1).	Seamanship (1).	General quarters(1).
	2	General quarters (1).	Seamanship (4).	Skirmish (4).	Target sm'll arms(4).
	3	Battal'n infantry (4).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Seamanship (1).	Battal'n infantry (4).	Battal'n infantry (4).	Battl'n infantry (4).
	5	Battal'n artillery (2).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Seamanship (3).	Battal'n artillery (2).	Battal'n artillery (2).	Battal'n artillery (2).
	7	Small sword (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	General quarters (2).	Small sword (3).	Small sword (3).	Small sword (3).
(Fifth week.)	M.	Battalion infantry.	General quarters (2).	General quarters (2).	General quarters (2).
	T.	Battalion artillery.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	W.	General quarters.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	Th.	Boats.	General quarters.	General quarters.	General quarters.
	F.	Battalion infantry.	Boats.	Boats.	Boats.
	S.	Seamanship.	Battalion infantry.	Battalion infantry.	Battalion infantry.
			Seamanship.	Seamanship.	Seamanship.
June 1 to 8.	ANNUAL EXAMINATION.				
June 9 to Aug. 30.	Practice cruise.				
Sept.....	On leave.				

SUMMARY OF PRACTICAL INSTRUCTION—Continued.

Kind of instruction.	During the academic year.				Total number of instructions during academic year.	During summer months.				During month of September, fourth year class.	Total number of instructions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
School of the battalion, infantry	10	11	11	11	43	..	..	..	..	..	43
Skirmish drill	4	4	4	4	16	..	..	..	..	..	16
Breadwork	10	9	..	..	19	..	..	..	..	..	19
Small sword	5	10	18	..	33	..	..	..	..	..	33
Practical instruction in division of compass	4	..	..	..	4	(*)	..	..	..	..	4
Practical instruction, navigation	114	113	..	..	..	(*)	..	..	..	..	127
Practical instruction, surveying	110	..	..	..	..	..	..	..	..	..	110
Machine-shop and running shop engines	20 and 113	30	..	..	60	..	54	..	..	..	114 and 113
Running steam launches .....	..	5	..	..	5	..	6	..	..	..	11
Practical instruction in chemistry .....	..	..	113	..	..	..	..	..	..	..	113
Gymnastics .....	..	..	..	20	20	..	..	..	..	..	20
Swimming .....	..	..	..	..	..	..	..	..	..	24	24
Dancing .....	..	..	..	20	20	..	..	..	..	..	20

* Practice cruises.

† Study periods.

The instructions in seamanship and gunnery on board of the *Wyand*, *Francis*, and *Stoddard* are also made instructions in running and managing the engines and boilers of these vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

SUMMARY OF PRACTICAL INSTRUCTION.

Kind of instruction.	During the academic year.				Total number of instructions during academic year.	During summer months.				During month of September, fourth class.	Total number of instructions, exclusive of practice cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
Seamanship, including stripping and rigging <i>Wyoming</i>	83	23	37	25	138	(*)		(*)	(*)		138
Rigging loft			15	19	34						34
Boats under oars, or sail			10	10	20	(*)	15	(*)	(*)		35
Naval tactics with steam launches.....	12	8			20		5				25
Navy signals, day.....		5			5	(*)	3				8
Navy signals, night.....						(*)	3				3
Army signals, day.....			5		5		2				7
Army signals, night.....							2				2
Monitor, with great gun practice	5				5						5
General quarters	6	6	6	6	24	(*)		(*)	(*)		24
General quarters, with target practice.....	4	4	4	4	16	(*)		(*)	(*)		16
Target practice, great guns.....	8	4			12		5				17
Pivot guns.....		5	9		14						14
Broadside guns			10	10	20	(*)		(*)	(*)		20
Torpedoes	4				4						4
Practical ordnance.....	10	5			15						15
Howitzers adfent.....							5				5
Target practice, howitzers.....							5				5
School of section										10	10
School of battery	4	5	5	5	19						19
School of battalion artillery	8	8	8	8	32						32
Target practice, machine guns.....		4			4		5				9
Target practice, small arms.....			9		9		5				14
Target practice, pistols.....			5		5						5
School of the soldier.....										24	24
School of the company	4	5	5	9	23						23

* Practice cruise.

SUMMARY OF PRACTICAL INSTRUCTION—Continued.

Kind of instruction.	During the academic year.				Total number of instructions during academic year.	During summer months.				Total number of instructions during practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.	
School of the battalion, infantry	10	11	11	11	43	..	..	..	..	43
Skirmish drill	4	4	4	4	16	..	..	..	..	16
Broadsword	10	9	..	..	19	..	..	..	..	19
Small sword	5	10	18	..	33	..	..	..	..	33
Practical instruction in derivation of compass	4	..	..	..	4	(*)	..	..	4	4
Practical instruction, navigation	116	113	..	..	..	(*)	..	..	..	127
Practical instruction, surveying	110	..	..	..	..	..	..	..	..	110
Machine-shop and running aboard engines	30 and 113	30	..	..	60	..	54	..	..	114 and 113
Running steam launches .....	..	5	..	..	5	..	6	..	..	11
Practical instruction in chemistry .....	..	..	113	..	..	..	..	..	..	113
Gymnastics .....	..	..	..	20	20	..	..	..	..	20
Swimming .....	..	..	..	..	..	..	..	..	24	24
Dancing .....	..	..	..	20	20	..	..	..	..	20

* Practice cruises.

† Study periods.

The instructions in seamanship and gunnery on board of the *Wyandah*, *Pascata*, and *Stoddah* are also made instructions in running and managing the engines and boilers of these vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.



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ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

ACADEMIC YEAR OF 1890-'91.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

ACADEMIC YEAR OF 1890-'91.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

THE UNITED STATES NAVAL ACADEMY.

FORTY-SIXTH ACADEMIC YEAR.*

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea, and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following-named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

* The number of the academic year was first printed in the Annual Register of 1865-'66, and was reckoned from the reorganization of the Naval School in 1850, when its name was changed to the United States Naval Academy. The number is now amended by the addition of five years, thus reckoning from 1845, the year in which the Academy was founded and formally opened.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities of training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was moved back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1869, this official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1869.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanism, chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two cadet engineers who had entered the Academy in 1867. After an interval of four years, in October, 1871, a new class of cadet engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and in 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress, approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1862, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and, from those who successfully complete the six years' course appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and Engineer Corps of the Navy and of the Marine Corps: *And provided further*, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year; such appointments to be made from the graduates of the year, at the conclusion of their six years' course, in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a surplus of graduates, those who do receive such appointment shall be given a certificate of graduation, an honor-

able discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress, approved March 2, 1889, provides that "the Academic Board of the Naval Academy shall, on or before the thirtieth day of September in each year, separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of their respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the Navy and Marine Corps of the Navy shall bear to the number of vacancies to be supplied from the Academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the Navy; and the cadets so assigned to the line and Marine Corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the Navy, and the cadets so assigned to the Engineer Corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the Engineer Corps of the Navy, and the cadets shall thereafter, and until final graduation, at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and Marine Corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the Navy and Marine Corps; and the vacancies in the lowest grades of the commissioned officers of the Engineer Corps of the Navy shall be filled in like manner by appointments from the final graduates of the Engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the Academic Board of the Naval Academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the Academic Board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the Navy, and not less than two shall be appointed annually to the Engineer Corps of the Navy, nor less than one annually to the Marine Corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available;

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the Academy shall be fifteen years and the maximum age twenty years."

SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

Assumed command:

- Sept. 3, 1845.—Commander Franklin Buchanan.
- Mar. 15, 1847.—Commander George P. Uphur.
- July 1, 1850.—Commander Cornelius K. Stribling.
- Nov. 1, 1853.—Commander Louis M. Goldsborough.
- Sept. 15, 1857.—Captain George S. Blake.
- Sept. 9, 1865.—Rear-Admiral David D. Porter.
- Dec. 1, 1869.—Commodore John L. Worden.
- Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
- July 1, 1878.—Commodore Foxhall A. Parker.
- Aug. 2, 1879.—Rear-Admiral George B. Balch.
- June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
- Nov. 14, 1881.—Captain F. M. Ramsay.
- Sept. 9, 1886.—Commander W. T. Sampson.
- June 30, 1890.—Captain R. L. Phythian.

BOARD OF VISITORS, JUNE, 1890.

Rear-Admiral L. A. KIMBERLY, U. S. Navy, *President.*

Hon. J. C. S. BLACKBURN, U. S. Senate, *Vice President.*

Hon. EUGENE HALE.....	U. S. Senate.
Hon. C. A. BOUTELLE.....	U. S. House of Representatives.
Hon. W. C. WALLACE.....	U. S. House of Representatives.
Hon. H. W. RUSK.....	U. S. House of Representatives.
Hon. MARSHALL M. MURDOCK.....	Wichita, Kansas.
Hon. WILLIAM A. NORTHCOTT.....	Greenville, Illinois.
Hon. H. W. ELLIOTT.....	Newcastle, Indiana.
Hon. J. H. GALLINGER.....	Concord, New Hampshire.
Hon. W. STUART WALCOTT.....	Utica, New York.
Hon. A. W. CAMPBELL.....	Wheeling, West Virginia.

ACADEMIC CALENDAR.

1890-1891.

1890.

Oct. 1.—Beginning of first term Wednesday.

1891.

Jan. 26-31.—Semi-annual examination Monday-Saturday.

Jan. 31.—End of first term Saturday.

June 1-6.—Annual examination Monday-Saturday.

June 6.—End of academic year, 1890-'91 Saturday.

May 15.—Examination of candidates for admission as naval
cadets Friday.

Sept. 1.—Examination of candidates for admission as naval
cadets Tuesday.

Oct. 1.—Beginning of first term, 1891-'92 Thursday.

The academic months end on the following days:

1890-1891.

October	Nov. 1	February	Feb. 2-
November	Nov. 29	March	Mar. 2-
December	Dec. 27	April	Apr. 2-
January	Jan. 24	May	May 2-

1891-1892.

October	Oct. 31	December	Dec. 26
November	Nov. 28	January	Jan. 23

CALENDAR FOR 1890-91.

SEPTEMBER.							MARCH.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
---	1	2	3	4	5	6	1	2	3	4	5	6	7
7	8	9	10	11	12	13	8	9	10	11	12	13	14
14	15	16	17	18	19	20	15	16	17	18	19	20	21
21	22	23	24	25	26	27	22	23	24	25	26	27	28
28	29	30	---	---	---	---	29	30	31	---	---	---	---
OCTOBER.							APRIL.						
---	---	---	1	2	3	4	---	---	---	1	2	3	4
5	6	7	8	9	10	11	5	6	7	8	9	10	11
12	13	14	15	16	17	18	12	13	14	15	16	17	18
19	20	21	22	23	24	25	19	20	21	22	23	24	25
26	27	28	29	30	31	---	26	27	28	29	30	---	---
NOVEMBER.							MAY.						
---	---	---	---	---	---	1	---	---	---	---	---	1	2
2	3	4	5	6	7	8	3	4	5	6	7	8	9
9	10	11	12	13	14	15	10	11	12	13	14	15	16
16	17	18	19	20	21	22	17	18	19	20	21	22	23
23	24	25	26	27	28	29	24	25	26	27	28	29	30
30	---	---	---	---	---	---	31	---	---	---	---	---	---
DECEMBER.							JUNE.						
---	1	2	3	4	5	6	---	1	2	3	4	5	6
7	8	9	10	11	12	13	7	8	9	10	11	12	13
14	15	16	17	18	19	20	14	15	16	17	18	19	20
21	22	23	24	25	26	27	21	22	23	24	25	26	27
28	29	30	31	---	---	---	28	29	30	---	---	---	---
JANUARY.							SEPTEMBER.						
---	---	---	---	1	2	3	---	---	---	---	---	---	---
4	5	6	7	8	9	10	6	7	8	9	10	11	12
11	12	13	14	15	16	17	13	14	15	16	17	18	19
18	19	20	21	22	23	24	20	21	22	23	24	25	26
25	26	27	28	29	30	31	27	28	29	30	---	---	---
FEBRUARY.							OCTOBER.						
1	2	3	4	5	6	7	---	---	---	---	1	2	3
8	9	10	11	12	13	14	4	5	6	7	8	9	10
15	16	17	18	19	20	21	11	12	13	14	15	16	17
22	23	24	25	26	27	28	18	19	20	21	22	23	24
---	---	---	---	---	---	---	25	26	27	28	29	30	31

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LIEUTENANT W. P. POTTER, Assistant and Drill Officer.
LIEUTENANT G. B. HARKER, Assistant and Drill Officer.
LIEUTENANT C. D. GALLOWAY, Assistant.
LIEUTENANT ALEXANDER SHARP JR., Assistant and Drill Officer.

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G. HEINTZ.

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ASSISTANT ENGINEER B. C. SAMPSON.

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 PASSED ASSISTANT SURGEON PHILIP LEACH, M. D.*
 PASSED ASSISTANT SURGEON L. W. CURTIS, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

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 ASSISTANT SURGEON S. G. EVANS, M. D.
 PAY DIRECTOR J. D. MURRAY, *Pay Officer.*
 PAY DIRECTOR CASPAR SCHENCK, *Commissary and General Storekeeper.*
 CHAPLAIN H. H. CLARK.
 ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*
 J. M. SPENCER, *Assistant Librarian.*
 R. M. CHASE, *Secretary.*

Attached to the Ships,

BOATSWAIN J. S. SINCLAIR,
 GUNNER R. SOMMERS,
 CARPENTER G. W. CONOVER.

MATES.

Attached to the Santee, the Wyoming, and the Phlox,

SAMUEL GEE, B. G. PERRY,
 C. J. MURPHY, W. G. SMITH.

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 CAPTAIN J. M. T. YOUNG,
 FIRST LIEUTENANT H. K. WHITE.

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THE SUPERINTENDENT.

THE COMMANDANT OF CADETS.

THE HEAD OF THE DEPARTMENT OF SEAMANSHIP, NAVAL CONSTRUCTION, AND NAVAL TACTICS.

THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.

THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.

THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.

THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.

THE HEAD OF THE DEPARTMENT OF MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.

THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

THE HEAD OF THE DEPARTMENT OF PHYSIOLOGY AND HYGIENE.

*Also in charge physical training of cadets.

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F. B. ZAHM.

CADET LIEUTENANT AND ADJUTANT,

R. E. BELKNAP.

CADET LIEUTENANTS,

N. E. IRWIN,
A. L. WILLARD,R. J. HARTUNG,
J. G. F. MOALE.

CADET MASTERS,

H. G. GILLMOR,
H. G. SMITH,C. D. STRAENS,
E. L. FLOWERS.

CADET ENSIGNS,

E. M. WATT,
E. T. POLLOCK,W. EVANS,
E. THRELL.

CADET PETTY OFFICERS OF THE FIRST CLASS,

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
SMITH, H. E.,	ALTHOUSE,	SENN,	MACFARLAND,
McKELVY,	BICKLER,	KURNELL,	McLEMORE,
KOCHERSPERGER.	LEIGH.	BLANKER.	HOUGH.

CADET PETTY OFFICERS OF THE SECOND CLASS,

MCDONALD,	BRUKET,	McNAMEE,	DAY,
EVANS,	HINES,	DAWSON,	HUFFINGTON,
MOORE.	LOW.	HUSSEY.	HOBBSVILLE.

SUMMER CRUISE, 1890.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP CONSTELLATION.

June 9 to August 30.

COMMANDER HENRY GLASS *Commanding.*
 LIEUTENANT-COMMANDER W. W. GILLPATRICK,
Executive Officer.
 LIEUTENANT G. B. HARNER, *Instructor in Navigation.*
 LIEUTENANT W. P. CLARON, *Navigator.*
 LIEUTENANT W. G. CUTLER, *Watch Officer.*
 LIEUTENANT DAVID DANIELS, *Watch Officer.*

LIEUTENANT O. G. DODGE, *Watch Officer.*
 ENSIGN R. H. MINER, *Watch Officer.*
 ENSIGN H. G. DRESSEL, *Watch Officer.*
 SURGEON R. S. MACKIE.
 ASSISTANT SURGEON C. H. T. LOWMEYER.
 PAYMASTER I. GOODWIN HORRIS.
 CHAPLAIN E. K. RAWSON.

NAVAL CADETS.

First Class.

Allen,	Hartung,	Richards,
Althouse,	Hough,	Robinson, <i>k</i>
Belknap,	Irwin,	Senn,
Bierer,	Kochersperger,	Shepard, <i>f</i>
Blamer,	Kuensli,	Smith, H. E.,
Blount,	Lane,	Smith, H. G.,
Brotherton,	Leigh,	Smith, L. G.,
Caldwell,	Macfarland,	Stearns, C. D.,
Carter,	McKelvy,	Sypher,
Christy,	McLemore, <i>k</i>	Theall,
Emrich, <i>f</i>	Moale,	Watt,
Evans,	Ninde,	Willard,
Flowers,	Nire,	Williams,
Ford,	Pollock,	Zahn.
Gillmor,	Preston,	
Gross,	Reed, <i>f</i>	

Third Class.

Asbury,	Gise,	Powell,
Bagley,	Groesbeck,	Powelson,
Baird,	Groff,	Pratt,
Berry,	Haina,	Price, <i>m</i>
Bisset,	Holsinger,	Procter,
Brady,	Hooker,	Read,
Campbell,	Jackson,	Ryan, J. P. J.,
Carver,	Jones, L. B., <i>m</i>	Scott,
Chadwick,	Kellogg,	Shaw,
Clark,	Lang,	Stearns, E. C.,
Coleman,	Logan,	Sticht,
Cook, <i>m</i>	Magill,	Sturdevant,
Crocker,	McKethan,	Townsend, <i>m</i>
Crosley,	Montgomery,	Trench,
Cruse,	Morris,	Upham,
Doddridge,	Nutting,	Valentine,
Douglas,	Parker,	Ward,
Elder,	Pearson,	Whitman,
Feild,	Perry,	Wilson,
Fewell,	Peugnet,	Wishart.
Fitch,	Potter,	

*Fourth Class.*Ryan, G. W. *m n*

NAVAL CADETS RETAINED AT THE ACADEMY FOR MACHINE SHOP AND OTHER PRACTICAL INSTRUCTION.

First Class—Engineer Division.

Emrich, <i>f</i>	Reed, <i>f</i>	Rowen,
Laws,	Robison,	Shepard, <i>f</i>
McGrann,		

Second Class.

Allen, C.,	Blakely,	Davis,
Arison,	Borden,	Davison,
Rall,	Breckinridge,	Dawson,
Bannon,	Campbell,	Day,
Beuret,	Crank,	Dennett,

f Detached from practice ship June 28, on assignment to Engineer Division.*k* Transferred sick to Naval Academy July 26.*k* Granted sick leave by Department July 15.*m* Joined ship on June 14.*n* Granted leave August 9.

Second Class—Continued.

Evans,	Mallison,	Rodney,
Ferguson,	Mather,	Russell,
Gamble,	McCormick,	Sawyer, F. L.,
Gibbs,	McDonald,	Sawyer, J. G.,
Haabrouck,	McNamee,	Sheehan,
Hinea,	Moses,	Stirling,
Hoblitzelle,	Myers,	Stitt,
Huffington,	Payne,	Stopford,
Hussey,	Pollard,	Symington,
Jewell,	Pollock,	Thompson,
Jones, B. E.,	Porter,	Traut,
Kellogg, E. S.,	Pringle,	Wedekind,
Low,	Rice,	Zillman,
Macklin,		

Fourth Class

Batta,	Groer,	Roberts, T. G.,
Berryman,	Hull,	Sandos,
Blandy,	Jones, L. B.,	Scott,
Chappell,	Kavanagh,	Sellers,
Chester,	Lane,	Snow,
Churchill,	Lyon,	Spear,
Cooper,	McCormack,	Talcott,
De Lany,	McLean,	Telfree,
Emery,	Osborn,	Turpin,
Fullinwider,	Perkins,	Whitted,
Gelm,	Ridgely,	Winship,
Graham,	Robert, W. P.,	

SUMMARY.

On board United States Practice Ship <i>Constellation</i>	14
Remaining at the Academy.....	7
Total	21

SYNOPSIS OF THE CRUISE, 1890.

CONSTELLATION.

Cadets, first and third classes, embarked June 9.
 Sailed from Annapolis June 11.
 Passed Cape Henry, bound to New London, Conn., June 20.
 Arrived at New London, Conn., June 26.
 Inspected by Secretary of the Navy, at New London, July 6.
 Cruised in Long Island Sound and vicinity until August 18.
 Sailed from New London for Annapolis August 18.
 Passed Cape Henry, bound to Annapolis, August 22.
 Arrived at Annapolis August 27.
 Cadets disembarked August 30.

RELATIVE STANDING OF NAVAL CADETS.

P Physically disqualified for the naval service.

* Received 85 per cent. of the multiple.

† Found deficient, allowed a reexamination, passed, and continued with class.

‡ Found deficient, allowed a reexamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for Engineer Division.

r Resigned.

Class of naval cadets appointed 1885, performing required service afloat.

Order of merit.	Name.	State from which appointed.	Date of admission.
1	Johnson, Richmond-Powson	Alabama	May 21, 1885
2	Reedy, George Henry	Michigan	May 20, 1885
3	Reed, Arthur Robinson	At large	Sept. 28, 1885
4	Swearing, Nathan Curtis	Wisconsin	Sept. 4, 1885
5	Wadsworth, Benjamin Franklin	Missouri	Sept. 5, 1885
6	Reese, William Francis	Maine	Sept. 9, 1885
7	Kittelle, Sumner Eliza	New York	May 19, 1885
8	Marshall, George Ralph	Massachusetts	Sept. 7, 1885
9	Walters, Louis McCoy	Virginia	Sept. 8, 1885
10	Reagan, Lewis Clark	Ohio	Sept. 9, 1885
11	Bottom, John Dapewer	South Carolina	May 21, 1885
12	Newmann, Rufus Stanchum	New Jersey	May 22, 1885
13	Long, Charles Grant	Massachusetts	Sept. 7, 1885
14	Wadsworth, William Donald	New York	May 19, 1885
15	Wadsworth, George Washington	Missouri	Sept. 7, 1885
16	Magruder, Thomas Pickens	Mississippi	Sept. 8, 1885
17	Lowndes, Edward Rutledge	Michigan	Sept. 29, 1885
18	de Steigman, Louis Rudolph	Ohio	Mar. 17, 1885
19	Wadsworth, George Francis	Texas	Sept. 4, 1885
20	Wadsworth, William Woodman	Maryland	May 19, 1885
21	Wadsworth, Louis George	Illinois	May 20, 1885
22	Offen, Cleland Nelson	Indiana	Sept. 5, 1885
23	Offen, William Gustav	Illinois	Sept. 5, 1885
24	Wadsworth, George Grant	Indiana	Sept. 7, 1885
25	Wadsworth, William Donald	Michigan	May 22, 1885
26	Wadsworth, Charles Augustus	Connecticut	Sept. 8, 1885
27	Wadsworth, William	Vermont	Sept. 4, 1885
28	Wadsworth, Robert Edward	Wisconsin	May 21, 1885
29	Wadsworth, William Jay	New Jersey	May 19, 1885
30	Wadsworth, Robert McMullen	California	Sept. 4, 1885
31	Wadsworth, William Kellogg	Texas	May 23, 1885
32	Wadsworth, John	Wisconsin	Sept. 7, 1885
33	Wadsworth, George Lucius	Indiana	May 21, 1885

Class appointed in 1886, performing required

Order of general merit.	Class appointed in 1886, performing required		
	Name.	State.	Date of admission.
1	Buhr, Thomas Francis.....	Tennessee.....	May 20, 1886
2	Spear, Lawrence.....	Ohio.....	May 19, 1886
3	Coleman, Noah Tunnelcliff.....	New York.....	May 21, 1886
4	Schofield, Frank Herman.....	New York.....	May 21, 1886
5	Chase, Jehu Valentine.....	Louisiana.....	Sept. 20, 1886
6	Gardley, Alonzo.....	Iowa.....	May 22, 1886
7	Ziegemeier, Henry Joseph.....	Ohio.....	May 21, 1886
8	Davis, Cleland.....	Kentucky.....	May 22, 1886
9	Signor, Matt. Howland.....	Nebraska.....	May 21, 1886
10	Blankenship, John Millington.....	Virginia.....	May 20, 1886
11	Buck, William Henry.....	Mississippi.....	May 22, 1886
12	Taylor, Montgomery Meigs.....	At large.....	May 21, 1886
13	Ritter, Henry Snyder.....	Pennsylvania.....	May 22, 1886
14	Williams, George Washington.....	South Carolina.....	Sept. 20, 1886
15	Catlin, Albertus Wright.....	Minnesota.....	May 24, 1886
16	Mc Vay, Charles Butler.....	Colorado.....	May 19, 1886
17	Vogelgraang, Charles Theodore.....	California.....	Sept. 6, 1886
18	Everhart, Lay Hampton.....	Alabama.....	May 20, 1886
19	Snow, William Alanson.....	Massachusetts.....	Sept. 6, 1886
20	Sullivan, Franklin Buchanan.....	At large.....	May 22, 1886
21	Bailey, Claude.....	Arkansas.....	Sept. 8, 1886
22	Neville, Wendell Cushing.....	Virginia.....	Sept. 12, 1886
23	Moses, Lawrence Henry.....	New York.....	Sept. 20, 1886
24	Davton, John Havens.....	At large.....	Sept. 12, 1886
25	Bestwick, Lucius Allyn.....	Massachusetts.....	Sept. 7, 1886
26	Bond, Charles Otis.....	Iowa.....	Sept. 8, 1886
27	Radford, Cyrus Sugg.....	Kentucky.....	May 25, 1886
28	Treadwell, Thomas Conrad.....	Massachusetts.....	May 21, 1886
29	Moffett, William Adger.....	South Carolina.....	Sept. 6, 1886
30	Lattimer, Julius Lane.....	West Virginia.....	Sept. 20, 1886
31	Edie, John Rufus.....	At large.....	May 19, 1886

Class appointed in 1886, performing required

Order of general merit.	Class appointed in 1886, performing required		
	Name.	State.	Date of admission.
1	Holmes, Urban Tiger.....	Arkansas.....	Sept. 12, 1886
2	Price, Claude Bernard.....	Mississippi.....	June 2, 1886
3	Dismukes, Baxter Eugene.....	do.....	May 21, 1886

service afloat.—Line division, 31 members.

Age at date of admission.		Order of merit.									Number of demerits.	Sea service in practice ships.		Order of general merit.
Years.	Months.	Seamanship, ship-building, and naval architecture.	Ordnance and gunnery.	Astronomy, navigation, and surveying.	Least squares and strength of materials.	Physics and chemistry.	Physiology and hygiene.	International law.	Discipline.	Months.		Days.		
16	6	2	2	2	2	2	2	3	11	20	6	29	1	
15	6	1	1	1	1	1	1	5	7	13	6	29	2	
16	2	4	4	3	3	5	4	9	26	72	6	29	3	
17	4	3	8	5	7	3	6	22	4	7	6	29	4	
17	8	7	7	9	5	4	14	17	21	39	4	12	5	
16	7	5	3	7	6	8	23	17	9	17	6	29	6	
17	1	13	6	4	25	5	20	4	8	20	6	12	7	
16	6	14	9	13	14	9	6	8	23	52	6	29	8	
15	5	25	17	8	4	10	17	28	17	51	6	29	9	
17	9	10	14	11	9	7	12	10	10	20	6	29	10	
17	7	17	16	21	17	11	3	15	4	5	6	29	11	
16	7	6	15	25	22	21	9	13	20	49	6	29	12	
16	3	8	10	9	20	11	10	16	1	0	6	29	13	
17	1	19	27	12	18	29	26	13	27	70	4	12	14	
17	5	14	5	6	15	19	8	12	24	77	6	29	15	
17	7	22	12	16	31	26	18	7	2	3	3	29	16	
17	7	21	28	24	28	18	5	10	3	7	4	12	17	
16	5	10	19	14	13	30	31	30	15	22	6	29	18	
16	7	23	21	23	23	14	13	6	6	6	4	12	19	
14	10	12	12	15	10	13	10	19	30	142	5	29	20	
16	10	29	25	17	15	19	26	27	18	45	4	12	21	
16	11	17	11	17	29	16	16	21	13	22	4	12	22	
16	2	27	23	20	8	27	23	2	31	125	4	12	23	
17	11	16	18	19	11	15	22	19	24	57	4	12	24	
16	6	9	20	28	11	24	21	26	27	56	4	12	25	
15	9	28	25	25	20	22	14	26	16	25	2	4	26	
17	11	26	21	30	27	17	28	28	14	21	6	29	27	
16	11	30	30	28	24	23	19	23	22	47	6	29	28	
16	10	19	29	25	29	28	25	1	29	82	4	12	29	
17	11	24	23	21	18	25	29	24	11	19	4	12	30	
15	7	30	31	31	26	31	30	31	19	45	4	14	31	

service afloat.—Engineer division, 3 members.

Age at date of admission.		Order of merit.										Number of demerits.	Sea service in practice ships.		Order of general merit.
Years.	Months.	Naval construction.	Marine engines.	Designing machinery.	Fabrication.	Boilers.	Least squares and strength of materials.	Mechanics.	Chemistry and physics.	Physiology and hygiene.	Discipline.		Months.	Days.	
17	4	1	1	1	2	1	1	1	2	2	1	28	4	12	1
17	7	2	2	2	3	2	3	2	1	1	2	43	6	29	2
16	7	3	3	3	1	3	2	2	2	3	3	50	6	29	3

Relative standing of the First Class (52 members)

Order of annual merit.	Name.	State.	Date of admission.
40	Allen, David Van Horn	Tennessee	Sept. 6, 1887
1	Atthousen, Adalbert	Illinois	May 21, 1887
2	Belknap, Reginald Rowan	Arkansas	Sept. 5, 1887
19	Blosser, Eben Barnett	Kansas	Sept. 24, 1887
4	Blosser, Dr. Wm	Iowa	May 19, 1887
1	Blosser, Irving	Indiana	Sept. 6, 1887
30	Brown, William Daniel	Wisconsin	Sept. 6, 1887
24	Cardwell, Harry Lemuel	Illinois	Sept. 7, 1887
34	Castro, James Francis	Pennsylvania	Mar. 24, 1887
8	Chittum, Horley Marshall	Ohio	May 24, 1887
21	Chittum, Charles Stuart	Illinois	May 19, 1887
16	Cusack, Valdo	Kansas	Sept. 7, 1887
20	Curry, Robert Lee	North Carolina	Sept. 7, 1887
0	Curry, William Howard	Iowa	Sept. 7, 1887
2	Curry, Wm. H. G. G. G.	Wisconsin	Sept. 8, 1887
1	Curry, Louis Monroe	Illinois	May 19, 1887
17	Curry, George Henry	Iowa	Sept. 6, 1887
21	Curry, George Henry	Massachusetts	Sept. 6, 1887
10	Curry, George Henry	Ohio	Sept. 29, 1887
1	Curry, George Henry	Pennsylvania	May 20, 1887
12	Curry, George Henry	Wisconsin	Sept. 6, 1887
25	Curry, George Henry	Ohio	June 2, 1887
38	Curry, George Henry	Iowa	May 21, 1887
32	Curry, George Henry	Mississippi	Sept. 6, 1887
0	Curry, George Henry	Virginia	Sept. 5, 1887
30	Curry, George Henry	New York	Sept. 6, 1887
27	Curry, George Henry	Tennessee	May 20, 1887
37	Curry, George Henry	Pennsylvania	May 20, 1887
23	Curry, George Henry	Tennessee	May 21, 1887
28	Curry, George Henry	California	Sept. 6, 1887
0	Curry, George Henry	Georgia	Sept. 27, 1887
14	Curry, George Henry	Indiana	May 20, 1887
1	Curry, George Henry	Empire of Japan	May 21, 1887
1	Curry, George Henry	Ohio	May 20, 1887
1	Curry, George Henry	Maryland	Sept. 6, 1887
21	Curry, George Henry	Iowa	Sept. 5, 1887
25	Curry, George Henry	Ohio	Sept. 12, 1887
0	Curry, George Henry	Alabama	May 21, 1887
24	Curry, George Henry	Michigan	May 20, 1887
12	Curry, George Henry	Pennsylvania	Sept. 27, 1887
28	Curry, George Henry	South Carolina	May 19, 1887
29	Curry, George Henry	Wisconsin	Sept. 27, 1887
10	Curry, George Henry	Ohio	May 20, 1887

at the annual examination, June, 1890.

Age at date of admission.		Order of merit.								Sea service in practice ships.			
Years.	Months.	Astronomy, navigation, and surveying.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Discipline.	Number of demerits.	Months.	Days.	Order of annual merit.
17	3	40	42	45	34	39	31	48	45	73	5	12	40
18	0	14	31	18	47	20	36	17	21	28	7	27	†
16	3	15	5	8	12	8	3	8	14	21	5	12	7
17	6	18	26	14	18	26	33	19	9	14	3	24	19
15	4	7	3	41	3	3	22	27	16	17	7	27	*4
17	6	20	35	34	44	44	32	45	47	73	5	12	†
15	11	20	21	15	34	33	38	36	34	45	5	12	30
14	7	44	19	42	24	23	14	37	37	50	5	12	24
18	0	30	32	23	33	41	39	43	43	75	7	27	36
16	8	9	8	17	9	11	25	12	24	42	7	27	8
16	8	24	18	34	31	19	17	21	41	69	5	11	22
17	10	11	16	27	15	13	29	28	35	49	5	12	16
16	10	22	19	11	20	29	23	30	23	32	5	2	20
15	7	32	43	19	45	46	26	32	8	12	5	12	:
17	8	5	2	5	1	2	7	15	15	28	5	12	*2
16	2	25	45	37	29	42	47	51	38	44	7	13	†
17	0	27	14	10	16	17	36	19	10	9	5	12	17
16	8	34	29	29	34	29	1	11	20	34	5	12	28
18	0	16	9	3	5	16	40	18	22	41	4	28	10
16	3	33	28	1	46	36	30	5	30	37	7	24	†
16	4	6	11	8	11	14	15	10	27	32	5	12	12
16	7	39	24	47	21	22	41	38	32	38	7	27	25
17	8	42	38	46	27	38	45	43	48	79	5	5	38
17	1	25	40	11	26	34	34	26	17	13	3	24	23
17	1	49	48	37	49	47	49	47	36	42	1	6	§
14	8	48	39	49	34	23	27	49	51	63	4	28	39
17	7	37	25	30	31	32	19	24	31	41	2	20	27
17	11	29	47	33	34	45	34	39	6	17	7	27	37
18	0	20	34	34	34	43	2	39	42	68	4	3	33
16	8	36	33	15	34	36	13	3	5	10	5	7	26
16	8	a	a	51	a	a	a	a	a	38	2	20	¶
16	10	13	17	23	13	15	10	2	33	51	7	27	14
17	8	a	a	22	a	a	a	31	19	30	7	27	b
16	7	7	12	31	10	12	16	34	13	15	4	28	11
16	4	37	46	40	34	49	20	22	18	23	5	9	†
17	10	35	21	2	30	25	20	4	7	11	3	10	21
15	7	41	43	47	25	31	46	15	49	87	3	24	33
16	0	*46	*47	31	*47	50	48	46	39	48	6	12	§
16	6	3	10	27	7	7	4	28	12	25	5	5	6
16	8	28	7	13	8	9	43	1	44	70	2	20	13
15	5	18	36	50	17	26	41	50	29	37	7	27	28
15	9	23	27	52	18	28	18	42	50	118	1	22	29
17	5	45	40	7	42	35	50	7	28	32	7	27	34

Relative standing of the First Class (52 members)

Order of annual merit.	Name.	State.	Date of admission.
46	Smith, Henry Gerriah	Ohio	Sept. 5, 1887
18	Smith, Lucien Greathouse	Illinois	June 3, 1887
9	Stearns, Clark Daniel	Michigan	Sept. 5, 1887
31	Sypher, Jay Hale	Arizona	Sept. 5, 1887
1	Theall, Ellisha	New York	May 28, 1887
75	Watt, Richard Morgan	Pennsylvania	Sept. 22, 1887
15	Willard, Arthur Lee	Missouri	Sept. 7, 1887
1	Williams, Dion	Ohio	July 16, 1887
*1	Wahm, Frank Baker	Pennsylvania	Sept. 5, 1887

* Deficient; continued with class.

at the annual examination, June, 1890—Continued.

Age at date of admission.		Order of merit.									Sea service in practice ships.		Order of annual merit.
Years.	Months.	Astronomy, navigation, and surveying.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Discipline.	Number of demerits.	Months.	Days.	
17	5	2	4	23	2	4	5	13	1	7	5	12	*3
17	6	16	23	19	22	17	11	25	11	16	7	27	18
17	8	12	15	4	13	9	8	14	3	9	5	12	9
16	6	45	29	23	27	26	24	34	46	70	5	12	31
14	5	43	48	44	42	48	44	32	40	54	7	27	†
15	3	4	6	37	6	5	11	9	1	3	5	12	*5
17	7	10	13	19	23	6	8	39	25	20	3	24	15
17	5	47	37	42	48	40	27	23	25	34	5	2	*1
16	3	1	1	6	4	1	6	6	4	14	5	12	*1

Relative standing of the second class (54 members)

Order of annual merit.	Name.	State.	Date of admission.
1	Allen, Charles	Ohio	Mar. 15, 1888
23	Arlson, Edgar Emmett	Pennsylvania	May 18, 1888
25	Ball, Walter	New York	Sept. 6, 1888
44	Bannon, Philip Michael	Maryland	May 21, 1888
41	Bouret, John Douglas	Ohio	Sept. 7, 1888
4	Blakely, John Russell Young	Pennsylvania	Sept. 29, 1888
34	Borden, Thomas Sheppard	Louisiana	Sept. 25, 1888
1	Breckinridge, Joseph Cabell	Kentucky	Sept. 5, 1888
8	Campbell, Joseph Randolph	Wyoming	Sept. 29, 1888
34	Crank, Robert Kyle	Texas	Sept. 6, 1888
29	Davis, Austin Rockwell	Georgia	May 21, 1888
9	Davison, Gregory Caldwell	Missouri	May 22, 1888
46	Dawson, William Charles	Missouri	Sept. 6, 1888
7	Day, George Calvin	Vermont	May 19, 1888
45	Dennett, Stanley Pullen	Maine	May 19, 1888
12	Evans, Holden A.	Florida	Sept. 5, 1888
43	Ferguson, Homer Lenoir	North Carolina	May 21, 1888
32	Gamble, Aaron Lichtenberger	Indiana	Sept. 5, 1888
44	Gibbs, Washington Dorsey	Mississippi	May 18, 1888
39	Haabronck, Raymond De Lancy	Idaho Territory	Sept. 25, 1888
23	Hines, John Fore	Kentucky	May 21, 1888
18	Hoblitzell, William Edward	Missouri	Sept. 6, 1888
13	Huffington, Howard Williams	Pennsylvania	May 19, 1888
11	Hussey, Charles Lincoln	New Hampshire	May 21, 1888
10	Jewell, Charles Theodore	At large	May 19, 1887
1	Jones, Beriah Elwood	Pennsylvania	May 19, 1888
41	Kellogg, Edward Stanley	New York	Sept. 5, 1888
22	Low, Theodore Henry	Connecticut	May 18, 1888
42	Macklin, Charles Fearn	New York	Sept. 25, 1888
40	Mallison, George	North Carolina	May 21, 1888
31	Mather, George Herbert	New Jersey	May 22, 1888
1	McCormick, Benjamin Bernard	New York	May 19, 1888
43	McDonald, Joseph Ezekiel	Illinois	Sept. 7, 1888
45	McNamee, Luke	Kansas	Sept. 6, 1888
37	Moses, Stanford Elwood	Georgia	Sept. 6, 1888
28	Payne, Fred Bonnaville	New York	May 21, 1888
43	Pollard, Charles Teed, Jr.	Texas	Sept. 25, 1888
20	Pollock, Emmett Riddle	Illinois	May 18, 1888
17	Porter, John Singleton	Tennessee	Sept. 25, 1888
26	Pringle, Joel Roberts Polnaett	Illinois	Sept. 6, 1888
21	Rice, Arthur	Indiana	Sept. 7, 1888
1	Rudney, Warren	Texas	Sept. 6, 1888
1	Russell, John Henry, Jr.	At large	May 18, 1888
5	Sawyer, Frederick Lewis	Illinois	Sept. 6, 1888
	Sawyer, Josiah Grigg	Illinois	May 19, 1888

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Page 26. Hoblitzell, should read Hoblitzelle.

at the annual examination, June, 1890.

Age at date of admission.		Order of merit.						Number of demerits.	Sea service in practice ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.		Months.	Days.	
17	11	40	49	37	40	6	34	72	4	17	†
15	2	35	34	42	9	41	36	82	4	17	33
16	1	17	15	38	35	30	47	148	1	27	25
16	2	46	44	39	53	30	28	54	4	17	44
17	7	1	1	2	3	1	24	49	1	27	*1
16	2	3	4	30	8	3	46	138	1	27	*4
16	6	39	29	13	14	29	32	71	1	27	24
16	6	43	58	27	32	53	39	83	1	27	†
16	6	12	2	12	16	5	23	53	1	27	8
16	8	44	30	19	12	32	49	179	1	27	34
16	9	26	16	40	30	12	50	158	4	17	29
17	0	6	8	8	32	15	16	28	4	17	9
17	5	9	12	1	1	28	27	51	1	27	6
16	6	8	5	6	28	13	14	32	4	17	7
15	11	46	46	52	44	45	8	33	4	17	45
16	9	13	21	5	18	39	19	9	1	27	12
15	2	4	7	4	2	16	25	51	4	17	*3
15	10	31	30	28	27	40	43	90	1	27	32
16	3	33	35	51	40	54	52	208	4	17	46
17	2	29	28	49	46	18	51	193	1	27	39
17	7	23	23	32	48	11	1	11	4	17	23
17	1	15	35	36	38	2	10	29	1	27	18
15	9	13	20	16	36	7	4	25	4	17	13
17	3	10	14	10	20	25	4	19	4	17	11
15	2	5	11	7	25	19	40	91	4	12	10
17	4	52	52	47	52	38	37	79	1	27	;
17	11	38	40	50	54	21	12	25	0	19	41
17	8	28	18	8	26	22	42	90	4	17	32
17	5	22	41	54	43	49	44	97	1	27	42
17	4	36	17	48	45	49	35	75	4	17	40
15	1	24	27	34	47	41	29	62	4	17	31
15	3	52	50	14	13	13	13	34	4	17	†
16	6	2	6	14	19	9	2	16	1	27	*2
17	5	7	10	3	9	10	21	42	1	27	*5
16	0	45	38	24	17	19	15	33	1	27	27
16	9	16	18	26	29	33	54	250	4	17	28
16	0	46	33	42	22	52	38	79	1	27	*43
15	5	21	37	23	5	37	26	51	4	17	20
15	8	11	9	22	36	25	47	149	1	27	17
15	7	41	43	35	7	47	29	76	1	27	36
17	3	33	42	18	22	4	10	25	1	27	21
17	1	54	50	46	49	51	33	72	1	27	†
15	6	31	47	40	51	36	20	35	2	20	†
17	4	30	3	10	21	22	9	28	1	27	
16	11	48	48	53	50	25	7	21	4	17	

Relative standing of the second class (54 members)

Order of annual merit.			
	Name.	State.	Date of admission.
19	Sheehan, James.....	New York.....	May 31, 1885
25	Stirling, Yates, Jr.....	Massachusetts.....	Sept. 6, 1885
26	Stitt, Thomas Lutz.....	Indiana.....	Sept. 5, 1885
27	Stopford, Frederick William.....	Massachusetts.....	May 19, 1885
30	Symington, Powers.....	West Virginia.....	Sept. 7, 1885
16	Thompson, Leon Seymour.....	Ohio.....	May 21, 1885
14	Trant, Frederick Augustus.....	Connecticut.....	May 12, 1885
7	Wedekind, George.....	New York.....	Sept. 5, 1885
28	Zillman, Christian Charles Herman.....	Missouri.....	Sept. 27, 1885

at the annual examination, June, 1890.—Continued.

Age at date of admission.		Order of merit.						Number of demerits.	Sea service in practice ships.		Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.		Months.	Days.	
15	8	19	38	32	15	7	31	65	4	17	19
16	4	19	22	45	40	46	45	124	0	28	25
15	1	37	32	21	80	35	6	10	1	27	26
15	7	25	24	31	24	44	53	250	4	17	37
15	11	41	25	20	6	48	41	90	1	27	30
14	0	17	25	28	9	33	2	18	4	17	16
16	11	26	13	24	4	16	17	37	4	17	14
16	6	51	53	42	38	24	18	44	1	27	21
17	8	40	44	17	34	43	22	35	1	27	28

Relative standing of the Third Class (72 members)

Order of annual merit.	Name.	State.	Date of admission.
53	Asbury, Louis George, Jr.	Louisiana.	Sept. 7, 1899
46	Bagley, Worth	North Carolina	Sept. 5, 1899
56	Baird, Lewis Conway	Indiana.	Sept. 6, 1899
7	Bennett, Ernest Linwood	Massachusetts.	Sept. 24, 1899
26	Berry, David Mark	California	Sept. 6, 1899
*1	Bisset, Eugene Lee	Kentucky	Oct. 2, 1899
30	Brady, John Richard	Pennsylvania.	Sept. 6, 1899
23	Campbell, Edward Hale	Indiana.	Sept. 6, 1899
54	Carver, Marvin	Minnesota	Sept. 27, 1899
22	Chadwick, Frank Laird	Minnesota	May 18, 1899
*8	Clark, Frank Hodges, Jr.	Rhode Island	Sept. 5, 1899
P	Cobb, John Addison, Jr.	Georgia.	May 22, 1899
32	Coleman, James Samuel	Alabama	Sept. 8, 1899
24	Cook, Allen Merriam	Kansas.	May 22, 1899
37	Crocker, John Archdell	Pennsylvania.	May 22, 1899
13	Crooley, Walter Selwyn	Connecticut	Sept. 9, 1899
46	Cruise, Andrew Jackson, Jr.	Pennsylvania.	May 18, 1899
7	Dalley, Harry Logan	Texas	Sept. 7, 1899
21	Doddridge, John Nelson	West Virginia.	Sept. 7, 1899
35	Douglas, Richard Spencer	Georgia.	June 3, 1899
*3	Elder, Edward Avery	Massachusetts.	May 21, 1899
13	Feld, Hubbard Moylan	Virginia	May 20, 1899
55	Fewell, Christopher Catron	Texas	Oct. 2, 1899
15	Fitch, Claude Kames	Illinois	Sept. 7, 1899
19	Giss, William Kern	Illinois	June 16, 1899
42	Groesbeck, William Gerard	Ohio	Sept. 5, 1899
*9	Groff, Joseph Colenatz	Maryland	Oct. 2, 1899
31	Hains, Peter Connor, Jr.	District of Columbia.	May 18, 1899
44	Holinger, Gerald Long	Kansas	Oct. 2, 1899
25	Hooker, James Clifton	Tennessee	Sept. 7, 1899
28	Jackson, Orton Porter	Pennsylvania.	May 18, 1899
7	Jama, Leland Frierson	South Carolina.	Sept. 8, 1899
7	Johnson Moulton Kinsinger	Ohio	June 10, 1899
1	Jones, Lewis Benson	New York	May 21, 1899
11	Kellogg, Thomas Steele	At large	Oct. 19, 1899
12	Lang, Charles Jonas	Pennsylvania.	Sept. 6, 1899
43	Logan, William Vance	Indiana	June 26, 1899
*4	Marill, Louis John	Pennsylvania	Nov. 11, 1899
1	Manton, Walter James	Louisiana.	May 21, 1899
50	McKethan Alfred Augustus	North Carolina	Sept. 8, 1899
14	Moutgomery, William Slack	Kentucky	Sept. 5, 1899
70	Morris, John Rameev	Missouri	Sept. 7, 1899
18	Nutting, Daniel Chapin, Jr.	Kansas	May 21, 1899
27	Olmstead Percy Napier	Oregon	May 21, 1899
*2	Parker, Thomas Brayton	South Carolina.	Oct. 2, 1899
53	Pearson, Henry Allen	Utah	Sept. 6, 1899
24	Perry, Joseph Albert	Illinois	Sept. 6, 1899

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at the annual examination, June, 1890.

Age at date of admission.		Order of merit.					Number of demerits.	Sea-service in practice-ships.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French, Spanish, and German.	Discipline.	Months.		Days.		
19	10	58	60	20	52	58	2	22	53	
15	5	46	49	25	51	50	2	22	46	
18	2	60	44	58	63	122	2	13	54	
17	10	a	a	a	a	1	0	0	7	
17	7	40	33	41	2	0	2	22	36	
18	1	1	1	6	25	30	2	22	*1	
16	11	30	28	30	64	127	2	22	30	
16	11	46	8	36	28	30	2	22	23	
18	5	41	49	06	36	29	2	22	56	
17	2	19	20	34	34	67	4	19	22	
17	9	12	6	17	6	16	2	22	*8	
16	3	a	a	a	a	73	1	27	P	
16	3	61	24	23	28	33	2	22	32	
18	8	15	18	39	49	43	4	14	24	
17	3	27	31	43	24	33	4	19	33	
17	10	38	9	30	3	15	2	22	17	
16	4	62	47	57	66	192	4	19	61	
18	4	a	a	a	a	129	0	0	7	
17	1	8	13	48	31	34	2	22	21	
17	10	25	38	29	55	73	4	19	35	
16	9	4	5	8	44	35	4	19	*3	
18	0	6	12	19	56	74	4	19	13	
15	11	50	43	63	42	48	2	22	56	
17	0	30	15	16	28	26	2	22	15	
18	0	5	31	24	20	29	4	19	19	
15	0	50	54	15	61	114	2	22	42	
19	4	21	10	7	12	16	2	22	*9	
17	4	30	42	24	41	30	4	19	31	
19	3	39	37	56	36	35	2	22	44	
18	1	25	46	10	5	16	2	22	25	
15	9	10	26	40	50	59	4	19	28	
17	0	a	a	a	a	30	0	0	7	
19	6	a	a	a	a	85	0	0	7	
16	6	64	65	51	42	42	4	14	†	
18	2	10	19	12	36	50	2	22	11	
19	10	12	15	14	45	46	2	22	12	
17	5	49	36	28	45	38	4	19	43	
18	9	15	7	2	21	35	2	22	*4	
16	5	53	62	26	60	129	1	27	5	
17	10	51	33	54	21	22	2	22	50	
16	1	23	3	45	18	18	2	22	14	
19	3	53	22	45	52	49	2	22	39	
19	9	9	21	27	8	16	4	19	13	
17	10	28	23	32	21	13	1	27	27	
18	2	1	10	3	13	20	2	22	*2	
19	8	42	54	60	4	13	2	22		
15	10	63	28	60	6	8	2	22		

Relative standing of the Third

Order of annual merit.	Relative standing of the Third		
	Name.	State.	Date of admission.
56	Pengnet, Maurice Berthold	Missouri.....	Sept. 7, 1889
57	Potter, James Boyd	New Jersey.....	Sept. 8, 1889
10	Powell, William Glasgow	New Jersey.....	May 18, 1889
57	Powelson, Wilfrid Van Nest	New York.....	Sept. 8, 1889
59	Pratt, Alfred Allen	Illinois.....	Sept. 7, 1889
7	Price, Henry Bertrand	Iowa.....	May 20, 1889
41	Procter, Andre Morton	Kentucky.....	Sept. 8, 1889
7	Randolph, William Browne	New York.....	May 20, 1889
34	Read, Frank De Witt	Ohio.....	Sept. 8, 1889
76	Ryan, George Whitehouse	Massachusetts.....	Sept. 8, 1889
18	Ryan, John Paul Joseph	New York.....	May 22, 1889
48	Scott, Guy Terrell	Nebraska.....	Sept. 7, 1889
75	Shaw, Graham	Pennsylvania.....	Sept. 7, 1889
51	Stearns, Edward Cheever	Ohio.....	May 21, 1889
45	Sticht, John Low	New York.....	Sept. 7, 1889
46	Sturdevant, Richard	Pennsylvania.....	Sept. 8, 1889
1	Townsend, Arthur Critchlow	Pennsylvania.....	May 22, 1889
40	Trench, Martin Edward	Minnesota.....	Oct. 3, 1889
38	Upham, Frank Brooks	Montana.....	Sept. 8, 1889
20	Valentine, William Stanley	New York.....	May 20, 1889
53	Ward, Henry Heber	New Jersey.....	Sept. 7, 1889
26	Wells, Chester	Pennsylvania.....	Nov. 15, 1889
49	Whitman, Walter Bloomfield	Texas.....	May 20, 1889
29	Wilson, Thomas Sheldon	Illinois.....	May 20, 1889
60	Wishart, William Clifton	North Carolina.....	May 20, 1889

Class, etc.—Continued.

Age at date of admission.		Order of merit.				Number of demerits.	Sea-service in practice-ship.		Order of annual merit.
Years.	Months.	English and history.	Algebra and geometry.	French, Spanish, and German.	Discipline.		Months.	Days.	
18	7	1	40	1	1	14	2	22	*6
16	8	56	56	52	57	85	2	22	57
17	8	34	17	4	36	48	2	22	10
17	0	12	2	13	40	30	2	22	*7
16	2	51	59	64	54	49	2	22	59
19	11	28	63	36	8	9	4	14	†
16	2	53	14	48	62	109	2	22	41
17	9	a	a	a	a	4	4	19	r
19	2	20	56	20	45	40	2	22	34
18	3	64	64	28	16	11	0	0	rb
19	9	22	20	10	19	22	2	22	16
16	8	44	48	41	48	33	2	22	48
15	8	33	45	20	65	167	2	22	r37
17	8	36	51	54	16	20	4	19	51
16	5	45	29	60	57	74	2	22	45
17	7	23	53	59	14	10	2	22	46
17	0	56	66	65	27	28	4	14	;
19	10	42	33	44	31	45	2	22	40
17	0	48	41	32	14	19	2	22	38
16	11	16	58	5	8	22	4	19	20
18	3	15	4	9	25	38	2	22	*5
19	1	34	25	18	59	90	0	0	26
18	6	37	51	52	8	3	4	19	49
18	1	7	26	48	31	35	4	19	29
17	10	66	61	47	34	41	4	19	60

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Fourth Class—81 members.

Name.	State.	Date of admission.	Age at date of admission.		Now serving practice at.	
			Years.	Months.	Months.	Years.
Adams, Lawrence Howell	Pennsylvania	Sept. 26, 1890	15	7		
Andrews, Claude Norton	Iowa	Sept. 8, 1890	16	6		
Babin, Provost	New York	Sept. 6, 1890	18	0		
Baker, Henry Thomas	Ohio	Oct. 7, 1890	16	4		
Baldwin, Murray	Texas	Sept. 27, 1890	17	11		
Batta, Edward Lee	Texas	May 22, 1890	17	11		
Bennett, Ernest Linwood	Massachusetts	Sept. 24, 1890	17	10		
Berryman John Russell	Ohio	May 22, 1890	17	11		
Bivins, Robert Francis	North Carolina	Sept. 27, 1890	16	9		
Blandy, Edwin Chauncey	Pennsylvania	May 20, 1890	17	8		
Bookwalter, Charles Sumner	Illinois	Sept. 8, 1890	16	10		
Bulmer, Roscoe Carlyle	Nevada	Sept. 26, 1890	15	11		
Chappell, Ralph Hubert	Michigan	May 22, 1890	18	11		
Chester, Arthur Treman	At Large	May 19, 1890	15	9		
Churchill, Winston	Missouri	May 21, 1890	18	6		
Cone, Hutch Ingham	Florida	Sept. 5, 1890	19	4		
Cooper, Ignatius Taylor	Delaware	May 20, 1890	17	11		
Cox, Daniel Hargate	New York	Sept. 9, 1890	17	6		
Craven, Thomas Tingey	Tennessee	Sept. 27, 1890	17	2		
Crosby, Benjamin Gratz	At Large	Sept. 26, 1890	18	8		
Daley, Harry Logan	Texas	Sept. 7, 1890	18	6		
De Jarnette Jas. Daniel Coleman	Virginia	Sept. 8, 1890	17	9		
De Kay, Eckford Craven	New York	Sept. 26, 1890	17	3		
De Lany, Edwin Hayden	Tennessee	May 21, 1890	19	3		
Emery, Arthur Ballard	New Hampshire	May 22, 1890	17	7		
England, Clarence	Arkansas	Sept. 5, 1890	18	2		
Follenwelder, Simon Peter	Missouri	May 21, 1890	18	9		
Gilbrath, Gilbert Smith	Pennsylvania	Sept. 8, 1890	18	5		
Gelin, George Earl	New York	May 22, 1890	19	7		
Gillis, Irvin Van Gorder	New York	Sept. 6, 1890	15	6		
Graham, Stephen Victor	Michigan	May 19, 1890	18	2		
Greer, George Tate	Virginia	May 20, 1890	18	5		
Griffith, Claude Willie	Maryland	Sept. 8, 1890	17	11		
Hinds, Alfred Walton	Alabama	Sept. 6, 1890	16	1		
Hock, Herman Whitelaw	Kansas	Sept. 8, 1890	19	5		
Hodgins, John Milton	Virginia	Sept. 8, 1890	18	10		
Holl, Alexander Thomas	Virginia	May 21, 1890	15	5		
Hurst, Walter Blake	South Carolina	Sept. 10, 1890	17	4		
James, Leland Erverson	South Carolina	Sept. 9, 1890	17	0		
Johnson, Milton Knutinger	Ohio	June 10, 1890	19	6		
Jones, Lewis Burton	New York	May 21, 1890	17	5		
Kavanaugh, Arthur Glenn	Nebraska	May 20, 1890	19	4		
Kryas, Frederick Charles	Pennsylvania	Sept. 6, 1890	18	2		
La Bach, Paul Mayer	North Dakota	Sept. 26, 1890	18	0		
Lape, Charles Arthur	Missouri	May 20, 1890	19	3		
Lebo, John McClane	Texas	Sept. 8, 1890	16	4		
Lyons, Frank	Kentucky	May 20, 1890	16	1		
Mason, Walter James	Louisiana	Sept. 6, 1890	17	9		
Mason, George Hiram	Pennsylvania	Sept. 6, 1890	16	4		
McAvoy, Isaac and Elizabeth	New Jersey	Sept. 6, 1890	17	7		
McGowan, Michael James	Michigan	May 22, 1890	16	7		

Fourth Class—81 members—Continued.

Name.	State.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
McLean, Ridley.....	Tennessee.....	May 20, 1890	17	6		
McMorris, Boling Kavanaugh...	Alabama.....	Sept. 15, 1890	18	6		
McNeely, Robert Whitehead...	North Carolina.....	Sept. 8, 1890	17	1		
Moody, Roscoe Charles.....	Maine.....	Sept. 8, 1890	17	6		
Osborn, Robert Hatfield.....	New York.....	May 23, 1890	16	6		
Perkins, Frederick King.....	California.....	June 11, 1890	17	6		
Reeves, Joseph Mason.....	Illinois.....	Sept. 8, 1890	17	10		
Ridgely, Randolph, Jr.....	Georgia.....	May 21, 1890	18	8		
Robert, William Pierre.....	Mississippi.....	May 20, 1890	16	10		
Roberts, Thomas Gaines.....	Alabama.....	May 27, 1890	19	9		
Ryan, George Whitehouse.....	Massachusetts.....	June 12, 1890	18	10	1	27
Sandoz, Fritz Louis.....	Louisiana.....	May 19, 1890	18	3		
Scott, William Pitt.....	Pennsylvania.....	May 20, 1890	16	11		
Sellers, David Foote.....	New Mexico.....	May 21, 1890	16	4		
Shaw, Melville Jones.....	Minnesota.....	Sept. 6, 1890	18	1		
Snow, Carlton Farwell.....	Maine.....	May 19, 1890	16	2		
Spear, Roscoe.....	Pennsylvania.....	May 23, 1890	18	4		
Stone, George Loring Porter.....	Georgia.....	Sept. 26, 1890	15	2		
Stone, Raymond.....	Alabama.....	Sept. 5, 1890	17	1		
Talcott, Arthur Jewell.....	Rhode Island.....	May 21, 1890	17	5		
Tolfree, Herbert Myron.....	New York.....	May 21, 1890	16	7		
Tompkins, John Thomas.....	Louisiana.....	Sept. 6, 1890	19	11		
Towne, Arthur Ellsha.....	South Dakota.....	Sept. 26, 1890	19	8		
Turpie, Walter Stevens.....	Maryland.....	May 25, 1890	15	8		
Walker, Henry Mallory.....	South Dakota.....	Sept. 8, 1890	19	6		
Watson, Edward Howe.....	Kentucky.....	Sept. 26, 1890	16	7		
Webster, Charles.....	Massachusetts.....	Sept. 6, 1890	16	8		
Whitted, William Scott.....	North Carolina.....	May 20, 1890	19	10		
Winn, Philip Bird.....	Kentucky.....	Sept. 12, 1890	19	4		
Winship, Emory.....	Georgia.....	June 3, 1890	18	3		

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

December 13, 1890.

	Members.
First class.....	48
Second class.....	51
Third class.....	61
Fourth class.....	81
Total.....	241

ERRATUM.

Page 35. Turpie, should read Turpin.

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS

November 23, 1889, to December 13, 1890.

APPOINTED ENSIGNS.

Naval Cadet Frank Marble	Class of 1891
Naval Cadet Ashley Herman Robertson	Class of 1891
Naval Cadet Carlo Bonaparte Brittain	Class of 1891
Naval Cadet Casey Bruce Morgan	Class of 1891
Naval Cadet William Michael Crose	Class of 1891
Naval Cadet John Flavel Hubbard	Class of 1891
Naval Cadet Delworth Wilson Beswick	Class of 1891
Naval Cadet Marcus Lyon Miller	Class of 1891
Naval Cadet Lloyd H. Chandler	Class of 1891
Naval Cadet George North Hayward	Class of 1891
Naval Cadet Samuel Shelburn Robison	Class of 1891
Naval Cadet Henry Kennedy Benham	Class of 1891
Naval Cadet Charles Frederick Hughes	Class of 1891
Naval Cadet Albert Leland Norton	Class of 1891
Naval Cadet James Henry Reid	Class of 1891
Naval Cadet William Buell Franklin	Class of 1891
Naval Cadet Henry Arnisto Wiley	Class of 1891
Naval Cadet Frederick Brewster Bassett, jr.	Class of 1891
Naval Cadet Herbert Grenville Gates	Class of 1891

APPOINTED ASSISTANT ENGINEERS.

Naval Cadet Armin Hartrath	Class of 1891
Naval Cadet Oscar William Koester	Class of 1891
Naval Cadet Edward Latimer Beach	Class of 1891
Naval Cadet Herman Osman Stickney	Class of 1891

APPOINTED ASSISTANT NAVAL CONSTRUCTOR.

Naval Cadet William Newton Vauzant	Class of 1891
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APPOINTED SECOND LIEUTENANTS U. S. MARINE CORPS

Naval Cadet John Archer Lejeune	Class of 1891
Naval Cadet Clarence Louis Adrian Ingate	Class of 1891
Naval Cadet Leroy Augustus Stafford	Class of 1891
Naval Cadet Eli Kelley Cole	Class of 1891
Naval Cadet Theodore Porter Kane	Class of 1891

RESIGNED.

Naval Cadet Edward Ernest West, class of 1888 s.....	May 6, 1889
Naval Cadet Walter James Manion, fourth class s.....	May 13, 1889
Naval Cadet George Tate Greer, fourth class	Jan. 22, 1890
Naval Cadet Ralph Collins Chadbourne, second class.....	Jan. 23, 1890
Naval Cadet Thomas Holdup Stevens Vail, fourth class.....	Jan. 29, 1890
Naval Cadet Edward Price Smith, fourth class.....	Feb. 8, 1890
Naval Cadet John Curlett, third class	Feb. 14, 1890
Naval Cadet Leonard Goodwin, third class.....	Feb. 14, 1890
Naval Cadet Joseph Coolidge Kilbourne, third class.....	Feb. 14, 1890
Naval Cadet Robert Abercrombie French, fourth class	Feb. 14, 1890
Naval Cadet John Russell Berryman, fourth class.....	Feb. 14, 1890
Naval Cadet Gordon Hood, fourth class	Feb. 14, 1890
Naval Cadet John Randolph Johnson, fourth class	Feb. 14, 1890
Naval Cadet Samuel Granger Latta, fourth class.....	Feb. 14, 1890
Naval Cadet Charles Fergus Neill, fourth class.....	Feb. 14, 1890
Naval Cadet Archibald Anthon, second class.....	Feb. 15, 1890
Naval Cadet Randolph Ridgely, jr., third class.....	Feb. 15, 1890
Naval Cadet Rozier Bonaparte Larkin, third class.....	Feb. 17, 1890
Naval Cadet Charles Arthur Lane, fourth class.....	Feb. 17, 1890
Naval Cadet Edgar Richmond, fourth class	Feb. 17, 1890
Naval Cadet Eugene Dewey Ryan, second class	Feb. 18, 1890
Naval Cadet Claude Norton Andrews, fourth class.....	Feb. 18, 1890
Naval Cadet William Walker Beck, second class	Feb. 20, 1890
Naval Cadet Frederick Lloyd Eaton, second class	Feb. 20, 1890
Naval Cadet Edward Trickle, second class	Feb. 21, 1890
Naval Cadet William Turner Saunders, second class.....	Feb. 24, 1890
Naval Cadet Franklin Sidney Rising, first class.....	Feb. 28, 1890
Naval Cadet William Alfred Baehr, fourth class	Mar. 4, 1890
Naval Cadet Joseph Duval Eberle, fourth class.....	Mar. 17, 1890
Naval Cadet Emory Winship, fourth class.....	Mar. 18, 1890
Naval Cadet Frederick King Perkins, fourth class.....	May 17, 1890
Naval Cadet Raymond Belt Swigart, third class.....	May 20, 1890
Naval Cadet John Addison Cobb, jr., fourth class	June 3, 1890
Naval Cadet George Whitehouse Ryan, fourth class.....	June 9, 1890
Naval Cadet Walter James Manion, fourth class.....	June 19, 1890
Naval Cadet Charles William Lyle, second class.....	June 20, 1890
Naval Cadet William Newton Vansant, class appointed 1884 t.....	June 30, 1890
Naval Cadet Graham Shaw, third class	Sept. 20, 1890
Naval Cadet William Browne Randolph fourth class	Sept. 30, 1890
Naval Cadet Josiah Grigg Sawyer, second class	Oct. 4, 1890
Naval Cadet George Wedekind, third class.....	Oct. 8, 1890
Naval Cadet Charles Teed Pollard, jr., second class	Oct. 22, 1890
Naval Cadet William Howland Ford, first class	Nov. 15, 1890
Naval Cadet Roby Robinson, first class.....	Nov. 15, 1890
Naval Cadet Beriah Ellwood Jones, second class.....	Nov. 15, 1890
Naval Cadet Arthur Critchlow Townsend, third class	Nov. 15, 1890

s Omitted in register of last year.

t Appointed assistant naval constructor July 1, 1890.

DISMISSED.

Naval Cadet Thomas Leoline Jenkins, fourth class Mar. 1, 1885
 Naval Cadet Andrew Jackson Cruise, jr., third class Oct. 22, 1885

DIED.

Naval Cadet George William Kirk, class appointed 1885 * Nov. 17, 1885

* Drowned.

MERIT-ROLLS FOR 1889-'90.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 75, showing the relative weight of the different branches, are used as co-efficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets who take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls." (Regulations U. S. Naval Academy, § 191.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum read "passed with distinction;" those whose final marks are between 74 per cent. and 85 per cent. of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent. and 74 per cent. of the maximum read "passed."

P Physically disqualified for the naval service.

** Received 85 per cent. of the multiple.*

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for engineer division.

r Resigned.

23	Bench, Edward Latimer.....	38.20	33.99	33.55	38.03	20.72	21.00	186.63	628.03	711.55	Assistant engineer.
24	Stichney, Herman Osman.....	39.34	27.10	36.63	28.27	24.54	16.68	172.96	532.00	704.96	Assistant engineer.
25	Wiley, Henry Arlosto.....	39.62	33.33	28.93	31.68	20.09	22.92	176.57	510.02	686.59	Ensign.
26	Bassett, Frederick Brewster, Jr.....	36.96	27.94	27.83	30.58	19.81	20.83	163.94	519.28	683.22	Ensign.
27	Kane, Theodoro Porter.....	39.62	30.36	27.61	35.75	19.96	20.28	173.57	509.11	682.08	Second lieutenant, Marine Corps.
28	Gates, Herbert Greenville.....	37.24	31.57	27.61	30.25	17.50	20.28	164.45	517.64	682.09	Ensign.

24	George G. Mitchell.....	46.07	14.65	55.08	37.18	9.42	6.10	13.00	14.70	8.01	18.80	223.01	156.11	108.21	52.24	540.57
25	Ben H. Fuller.....	47.94	12.65	58.50	40.56	9.93	5.80	16.00	14.35	8.23	8.67	223.62	151.21	109.72	55.70	540.85
26	Charles A. Brand.....	48.28	15.90	53.28	35.36	9.75	5.80	14.70	13.95	8.73	12.80	218.55	150.71	107.73	62.77	539.76
27	Philip Williams.....	49.30	12.75	53.46	34.97	8.52	6.20	13.30	12.85	8.16	12.13	211.61	150.85	106.42	57.47	535.98
28	Robert E. Carney.....	51.34	17.15	51.84	35.49	8.25	6.10	11.40	13.85	8.43	14.53	218.38	151.90	104.02	55.47	529.77
29	Warren J. Terhune.....	44.88	14.15	49.86	33.93	7.74	5.80	13.30	13.06	8.67	7.20	198.58	166.82	111.81	59.98	527.19
30	Robert McM. Dutton.....	44.20	14.45	50.94	32.11	8.37	5.80	12.65	13.00	8.70	12.67	202.69	148.92	107.65	54.20	513.65
31	William K. Harrison.....	43.35	14.30	48.78	34.58	8.49	5.80	13.35	13.30	7.98	15.47	206.40	150.68	101.71	52.70	510.49
32	Julius Prochaska.....	43.60	15.95	45.00	34.81	8.94	6.50	12.90	12.90	7.89	17.87	206.48	147.21	98.08	51.74	503.51
33	George L. Fernier.....	47.26	17.20	45.90	32.89	9.09	6.90	12.50	13.35	0.00	0.00	185.09	148.94	106.78	51.38	492.19

* Completed four years course "with distinction."

c Completed four years' course "with credit."

Merit roll of the naval cadets of the first class, line division. — Annual examination, June, 1900.

NAME	Seamanship, ship building, and naval architect- ure.	Ordnance and gun- nery.	Astronomy, navi- gation, and sur- veying.	Elementary and advanced mathe- matics.	Physics and chem- istry.	Physiology and hygiene.	International law	Discipline.	Aggr. rate for fourth year.	Aggr. rate for third year.	Aggr. rate for second year.	Aggr. rate for first year.	General aggr. rate for four years.
	84	73	64	50	35	13	4	20	304	324	102	76	760
Maximo .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1 Thomas F. Baum ..	78.96	62.10	56.48	17.35	16.45	10.29	6.70	15.73	254.08	196.26	137.00	71.25	649.53
2 Lawrence Spear ..	80.72	61.41	56.95	17.85	16.50	10.95	6.61	16.94	270.80	192.80	132.23	64.23	664.06
3 Noble T. Coleman ..	75.02	61.10	54.02	17.30	15.45	9.75	6.38	16.47	249.39	186.50	131.22	60.25	633.45
4 Frank H. Schell Id ..	74.10	57.46	53.61	15.76	16.25	9.66	5.02	17.73	254.01	184.65	125.03	64.51	628.60
5 John V. Coates ..	66.00	59.04	51.10	16.53	15.15	9.21	6.12	12.33	226.19	180.76	126.23	66.17	600.37
6 Abner G. Bailey ..	71.20	61.56	52.16	15.50	15.10	8.61	6.12	16.00	210.74	177.36	117.80	58.70	602.60
7 Henry F. Zenger ..	61.24	59.22	52.41	13.05	15.45	8.94	6.66	16.07	257.07	171.24	130.97	63.06	602.14
8 Philip D. La ..	62.02	56.31	48.72	14.20	15.05	9.00	6.41	11.73	224.66	172.54	126.11	64.47	599.18
9 Matt A. Sargent ..	68.30	55.62	51.84	16.75	14.95	9.03	5.80	12.87	223.06	169.62	121.96	61.81	576.45
10 John M. Buchanan ..	65.14	54.72	49.44	13.03	15.40	9.40	6.34	15.80	231.39	163.57	114.09	61.73	574.78
11 William H. Cook ..	61.60	54.10	41.44	13.80	14.40	9.81	6.26	17.73	222.48	160.54	121.09	64.29	568.40
12 Montgomery M. Taylor ..	67.54	51.16	42.72	13.50	13.75	9.54	6.30	12.40	219.03	164.17	112.10	62.26	569.46
13 Henry S. Lister ..	65.74	55.62	51.36	13.55	14.80	9.45	6.24	18.00	234.40	158.01	109.60	57.11	559.32
14 George W. Williams ..	60.72	49.56	48.96	13.05	13.05	8.37	6.30	10.14	210.64	161.95	120.18	66.17	558.08
15 Albert W. Catlin ..	62.02	59.76	52.12	13.85	13.80	9.63	6.32	16.87	229.47	159.32	109.33	54.53	556.65
16 Charles H. McVay, Jr ..	56.16	54.90	47.04	11.80	13.35	9.00	6.48	17.03	219.64	159.95	117.33	54.29	555.25
17 Charles J. Vogelsong ..	59.10	46.42	42.86	12.60	13.45	9.72	6.34	17.74	210.95	158.43	117.42	62.59	549.19
18 Lewis H. Everett ..	61.34	52.46	46.01	14.35	12.95	8.97	5.26	15.33	222.76	155.73	112.32	57.84	548.15
19 William A. Snow ..	64.74	51.90	41.32	17.15	12.95	9.87	6.80	17.01	215.44	157.26	114.00	59.19	546.49
20 Franklin B. Sullivan ..	64.40	54.90	47.76	14.70	14.55	9.45	6.60	15.15	215.40	165.63	105.47	55.65	542.21
21 Charles Bailey ..	57.20	50.56	46.40	13.85	13.80	8.37	6.72	17.69	206.52	154.90	112.44	61.67	541.02
22 Wendell C. Neville ..	61.60	55.44	46.40	12.50	14.15	9.90	5.96	15.60	230.76	174.00	103.67	58.01	539.13
23 Lawrence H. Moore ..	57.46	51.12	45.76	15.55	13.30	8.64	6.72	1.80	211.81	161.29	110.66	61.27	520.65

24	John H. Dayton.....	62.04	63.64	46.24	14.45	14.20	8.70	6.00	10.87	216.14	152.86	107.20	58.31	534.57
25	Lucas A. Bestwick	65.56	52.20	42.24	14.45	13.50	8.79	5.70	10.13	212.03	154.83	107.58	55.90	530.84
26	Charles O. Bond	57.64	50.58	42.72	13.55	13.65	9.24	5.78	14.20	207.36	161.06	107.02	53.73	528.17
27	Cyrus S. Ralford	53.08	51.66	41.92	12.75	14.10	8.34	5.50	15.40	207.75	158.80	107.16	54.75	528.46
28	Thomas C. Treadwell	55.88	46.96	42.24	13.20	13.55	8.97	5.90	12.00	198.72	157.37	107.91	61.88	525.78
29	William A. Moffett	60.72	47.70	42.72	12.50	13.10	8.61	6.96	8.93	201.24	152.28	111.82	60.05	535.37
30	Julius L. Latimer.....	58.52	51.12	44.48	13.65	13.45	8.28	5.88	15.73	211.11	155.25	97.95	52.02	516.33
31	John R. Edie	58.68	45.18	40.80	12.85	12.56	8.19	5.14	12.47	193.00	149.28	105.41	50.49	504.24

* Completed four years' course "with distinction."

* Completed four years' course "with credit."

Merit roll of the naval cadets of the first class, engineer division.—Annual examination, June, 1880.

NAME	Naval construction	Marine engines	Boiling and machinery	Fabrication	Boilers	Local aqueduct and strength of materials	Mechanics	Chemistry and physics	Physiology and hygiene	Discipline	Aggregate for				General average for four years.
											first year.	second year.	third year.	fourth year.	
Manima	24	44	60	24	24	20	24	24	12	20	204	222	222	182	760
Urban T. Holmes	25.94	20.24	48.20	20.46	20.06	17.70	20.82	1-24	8.67	14.93	244.30	161.06	114.83	56.23	600.73
Claude B. Price	27.41	35.52	41.05	18.66	27.90	12.45	16.94	14.42	9.09	12.40	224.48	166.04	100.15	56.92	556.90
Doctor E. Dismukes	21.40	20.84	37.50	20.70	24.84	13.80	15.06	17.64	8.61	11.80	204.12	181.62	101.79	54.40	512.09

Completed four years' course with credit

Merit-roll of naval cadets, second class (52 members), annual examination, June, 1890.

Order of annual merit.	NAME.	Astronomy, navigation, and surveying.	Steam machinery, marine engines, and boilers.	Practical work in steam engineering.	Mechanics and applied mathematics.	Physics.	Modern languages.	Mechanical drawing.	Discipline.	Aggregate.
	Maxima	12	48	12	60	48	20	16	12	228
*1	Frank B. Zahn	11.07	43.80	10.14	54.75	42.84	17.85	14.16	10.34	204.95
*2	Horatio G. Gillmor	10.50	43.32	10.28	55.95	42.24	17.80	13.24	9.66	202.97
*3	Henry G. Smith	11.01	42.12	9.48	55.80	41.16	17.90	13.36	10.66	201.49
*4	DeWitt Blamer	10.38	42.72	9.00	55.50	41.64	15.90	12.60	9.54	197.28
*5	Richard M. Watt	10.62	41.52	9.12	51.90	39.60	17.15	13.64	10.66	194.21
6	John K. Robison	10.08	40.08	9.42	50.40	39.24	17.95	12.56	9.78	190.11
7	Reginald K. Belknap	9.81	41.88	9.93	47.55	39.00	18.05	13.68	9.68	189.58
8	Harley H. Christy	10.32	40.80	9.66	49.95	37.80	15.55	12.40	8.76	186.24
9	Clark D. Stearns	9.99	38.64	10.41	46.80	38.70	17.70	13.28	10.42	186.00
10	Noble E. Irwin	9.57	40.32	10.56	52.05	36.48	14.30	12.04	8.94	185.26
11	Edwin T. Pollock	10.38	39.60	9.33	49.65	37.44	16.80	12.20	9.74	185.14
12	Henry C. Kuenzli	10.47	39.72	9.93	48.30	37.08	16.85	13.60	8.66	184.61
13	John H. Rowen	8.73	41.04	9.81	50.10	38.76	14.15	15.08	6.74	184.41
14	Daniel B. Ninde	9.96	37.68	9.48	46.80	36.72	17.25	15.04	8.22	181.15
15	Arthur L. Willard	10.26	39.36	9.60	40.95	39.36	17.70	11.44	8.70	177.37
16	Waldo Evans	10.14	38.04	9.42	46.35	37.32	15.10	12.56	8.02	176.95
17	Renwick J. Hartung	8.76	39.24	9.90	44.55	36.00	14.50	13.00	9.92	175.87
18	Lucien G. Smith	9.57	35.88	9.60	41.70	36.00	17.15	12.68	9.90	172.48
19	Bion B. Blier	9.51	35.28	9.78	43.65	33.60	14.65	13.00	9.94	169.41
20	Robert L. Flowers	9.09	36.72	9.87	42.90	33.24	15.65	12.40	8.78	168.65
21	Milton E. Reed	8.46	36.48	10.62	38.40	33.84	16.10	14.64	10.04	168.56
22	Charles R. Emrich	8.88	37.08	9.24	38.10	35.52	16.75	12.90	7.08	165.61
23	Henry H. Hough	8.49	32.84	9.39	37.65	33.24	18.90	13.56	9.20	164.27
24	Harry H. Caldwell	7.83	36.72	8.97	39.75	33.96	16.90	12.04	7.88	164.05
25	Rufus H. Lane	8.25	35.64	8.70	41.85	34.32	14.20	11.80	8.28	163.94
26	John G. F. Moale	8.43	33.12	9.69	37.65	31.80	17.10	14.80	10.28	162.87
27	William H. McGrann	8.34	35.52	9.26	38.10	32.88	16.25	12.76	8.32	161.53
28	Thomas J. Senn	9.51	32.64	8.43	44.40	33.60	14.20	10.08	8.56	161.42
29	George H. Shepard	8.94	35.16	8.10	43.65	33.48	16.35	11.36	4.20	161.24
30	William D. Brotherton	9.21	36.48	9.69	37.65	32.28	14.45	12.16	8.08	160.00
31	Jay H. Sypher	7.80	33.84	9.48	39.00	34.80	15.60	12.20	6.54	159.26
32	Richard H. Leigh	8.82	31.56	9.67	39.15	32.16	14.55	12.64	9.48	158.23
33	Albert S. McLemore	8.61	32.88	9.24	37.65	30.24	18.15	11.44	6.94	155.15
34	Harry E. Smith	7.80	31.56	10.11	37.50	32.04	13.25	13.84	8.58	154.68
35	George Richards	8.04	31.20	8.70	39.30	33.00	13.85	13.24	5.92	153.25
36	James F. Carter	8.61	33.24	9.48	37.95	30.96	14.40	11.32	6.86	152.82
37	William M. McKelvy	8.67	30.36	9.30	37.65	30.00	14.55	11.44	10.08	152.05
38	George W. Laws	7.95	32.24	8.79	39.00	31.68	14.05	11.32	6.18	151.25
39	Horace G. Macfarland	7.53	32.16	8.46	37.65	33.96	15.20	10.20	4.19	149.35
40	David V. H. Allen	8.22	31.44	8.85	37.65	31.32	14.80	10.48	6.58	149.34
†	Adelbert Althouse	9.87	38.72	9.63	36.00	34.80	14.50	13.08	9.12	160.72
†	Frank H. Kochersperger	8.55	34.20	11.13	36.15	31.80	15.00	14.40	8.48	159.69
†	Charles F. Preston	8.34	30.48	9.06	37.65	29.16	16.10	12.86	9.46	153.77
†	William H. Ford	8.58	31.20	9.60	36.30	29.76	15.25	12.24	9.98	151.77
†	Dion Williams	7.50	32.40	8.97	34.95	31.08	15.20	12.84	8.70	151.77

THE UNIVERSITY OF CHICAGO

Merit-roll of naval cadets, second class (52 members), etc.—Continued.

Order of annual merit.	NAME.	Astronomy, navigation, and surveying.		Steam machinery, marine engines, and boilers.		Practical work in steam engineering.		Mechanics and applied mathematics.		Physics.	Modern languages.	Mechanical drawing.		Discipline.	Aggregate.
		12	45	12	60	45	20	16	12			25			
1	Irving Blount	9.21	32.76	9.24	36.45	30.12	14.75	11.24	6.26	150.57					
1	Lewis H. Crona	8.82	30.60	9.12	34.55	30.60	13.70	9.76	7.66	148.81					
1	Elisha Threll	7.89	30.00	8.88	37.50	29.40	14.10	12.24	7.18	147.16					
1	Roby Robinson	7.65	30.36	9.33	35.70	26.88	13.55	10.88	7.36	141.71					
2	Charles W. Lyle	6.75	30.00	9.12	33.45	29.64	13.40	10.76	8.00	141.11					
a	John T. Myers			8.19											
b	Kagekazu Nire			9.51				12.32	9.22						

a, sick. b, deficient, continued with class.

Merit-roll of naval cadets, third class (54 members), annual examination, June, 1890.

Order of annual merit.	Name.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Aggregate.
	Maxima.....	48	24	24	24	24	8	182
*1	John D. Beuret.....	48.36	22.56	21.96	22.56	22.92	5.66	144.02
*2	Joseph E. McDonald.....	47.76	20.40	19.98	19.32	20.28	6.67	134.41
*3	Homer L. Ferguson.....	43.44	20.22	21.42	22.62	19.68	6.65	133.03
*4	John R. Y. Blakely.....	46.44	20.94	18.42	20.70	22.02	8.27	131.79
*5	Luke McNamee.....	42.48	19.86	21.90	20.40	20.22	5.84	130.70
*6	William C. Dawson.....	40.44	19.44	22.56	23.94	18.84	5.44	130.06
7	George C. Day.....	42.00	20.52	21.00	18.48	19.92	6.16	128.08
8	Joseph R. Campbell.....	38.64	21.72	20.22	19.74	21.36	6.68	127.36
9	Gregory C. Davison.....	42.72	20.16	20.58	17.82	19.80	6.11	127.19
10	Charles T. Jewell.....	43.20	19.62	20.64	18.72	19.38	4.40	125.96
11	Charles L. Hussey.....	39.96	18.24	20.46	19.26	18.90	6.50	123.32
12	Holden A. Evans.....	38.16	17.40	21.36	19.44	17.86	0.96	121.20
13	Howard W. Huffington.....	38.16	17.70	19.88	17.52	20.82	6.50	120.66
14	Frederick A. Traut.....	34.56	18.96	18.90	22.38	19.68	6.03	120.51
15	Frederick L. Sawyer.....	33.84	21.42	20.46	19.20	19.20	6.23	120.88
16	Leon S. Thompson.....	36.72	17.10	18.54	20.40	18.36	6.67	117.79
17	John S. Porter.....	39.00	20.10	19.20	17.52	18.90	2.61	117.33
18	William E. Hoblitzelle.....	37.56	16.14	17.64	17.28	22.08	6.24	116.94
19	James Shehan.....	35.88	15.72	18.12	19.98	20.82	5.21	115.73
20	Emmett R. Pollock.....	35.64	16.08	19.02	21.12	18.12	5.51	115.49
21	Arthur Rice.....	33.36	15.30	19.56	19.14	21.84	6.24	115.44
22	Theodore H. Low.....	34.32	17.70	20.58	18.66	19.20	4.36	114.87
23	John F. Hines.....	35.40	17.22	18.12	16.50	20.04	6.85	114.13
24	Thomas S. Borden.....	31.92	16.68	20.04	20.04	18.54	4.09	112.21
25	Walter Ball.....	36.72	18.06	17.28	17.64	18.48	2.61	110.79
26	Thomas L. Stitt.....	32.52	16.32	19.26	17.94	18.30	6.43	110.77
27	Stanford E. Moses.....	30.96	15.72	18.90	19.62	19.36	6.14	110.72
28	Fred R. Payne.....	36.96	17.76	18.84	18.30	18.36	-0.51	109.71
29	Austin E. Davis.....	34.56	17.94	17.10	17.94	19.98	2.12	109.64
30	Powers Symington.....	31.32	17.10	19.38	20.88	16.66	4.37	109.61
31	George H. Mather.....	35.28	17.04	17.94	16.68	17.28	5.23	109.44
32	Aaron L. Gamble.....	33.72	16.50	18.54	18.54	17.64	4.32	109.26
33	Edgar E. Arison.....	33.12	16.20	17.04	20.40	17.28	4.72	108.76
34	Robert K. Crank.....	31.08	16.50	19.50	20.22	18.42	2.46	108.18
35	Yates Sterling, Jr.....	35.88	17.28	16.98	17.22	16.80	3.52	107.68
36	Joel R. P. Pringle.....	31.32	15.24	17.88	20.76	16.74	5.22	107.16
37	Frederick W. Stopford.....	35.04	17.16	18.36	19.02	16.98	-0.40	106.16
38	Christian C. H. Zillman.....	30.48	15.06	19.62	17.76	17.16	5.78	105.86
39	Raymond De L. Haabrouck.....	34.08	16.92	16.50	16.80	19.62	1.78	105.70
40	George Mallison.....	32.64	17.82	16.56	16.86	16.50	4.91	105.29
41	Edward S. Kellogg.....	32.16	15.66	16.26	15.72	19.26	6.22	105.28
42	Charles F. Macklin.....	35.52	15.42	15.24	17.04	16.50	4.16	103.87
43	Charles T. Pollard, Jr.....	30.72	16.26	17.04	19.14	15.90	4.45	103.51
44	Phillip M. Bannon.....	30.48	15.06	17.22	15.78	18.48	5.35	102
45	Stanley P. Dennett.....	30.72	15.00	15.48	16.98	16.86	6.27	101

Merit-roll of naval cadets, third class (54 members), etc.—Continued.

Order of annual merit	Name.	Trigonometry, analytical geometry, and descriptive geometry.	Chemistry and physics.	English, history, and the constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Aggregate.
		44	24	24	24	24	8	162
46	Washington D. Gibbs.....	33.36	16.14	15.90	17.22	15.42	6.88	98.72
1	Benjamin B. McCormick.....	29.64	14.40	19.96	20.10	19.92	6.21	110.23
1	Charles Allen.....	31.44	14.58	17.40	17.22	21.00	4.94	106.58
1	John H. Russell, jr.....	33.72	14.76	17.10	15.96	18.18	5.91	105.63
2	George Wedekind.....	30.24	14.22	17.04	17.28	19.14	6.01	103.93
2	Jonah G. Sawyer.....	30.60	14.64	15.42	16.02	18.90	6.60	101.18
1	Joseph C. Breckinridge.....	31.20	14.22	18.72	17.82	15.54	4.43	101.93
1	Bertie E. Jones.....	29.64	14.34	16.62	15.84	18.00	4.67	99.13
1	Warren Rodney.....	29.28	14.40	16.48	16.38	16.20	4.98	98.72

Merit-roll of naval cadets, fourth class (72 members), annual examination, June, 1890.

Order of annual merit.	NAME.	English and history.	Algebra and geometry.	French, Spanish, and German.	Discipline.	Aggregate.
	ERRATUM. Page 51. Joseph C. Graff should read " " Groff.					
	Maxima.....	24	24	24	4	76
*1	Eugene L. Bisset	21.96	23.28	21.66	3.26	70.16
*2	Thomas D. Parker	21.96	20.16	23.38	3.40	67.90
*3	Edwin A. Elder	21.06	22.20	21.36	3.08	67.70
*4	Louis J. Magill	19.86	21.12	22.50	3.28	66.76
*5	Henry H. Ward	19.86	22.32	21.12	3.26	66.56
*6	Maurice B. Pengnet	21.96	16.56	24.42	3.58	66.52
*7	W. V. N. Powelson	20.04	22.68	20.64	3.13	66.49
*8	Frank H. Clark, Jr.	20.04	21.96	19.62	3.44	65.06
*9	Joseph C. Graff	19.62	20.16	21.42	3.41	64.61
10	William G. Powell	18.78	19.08	22.20	3.15	63.21
11	Thomas S. Kellogg	20.16	18.84	20.94	3.15	63.09
12	Charles J. Lang	20.04	19.26	20.58	3.07	62.95
13	Hubbard M. Feild	20.58	20.10	19.38	2.75	62.81
14	William S. Montgomery	19.32	22.50	17.34	3.32	62.48
15	Claude E. Fitch	18.90	19.26	20.40	3.29	61.76
16	John P. J. Ryan	19.50	17.88	21.00	3.31	61.69
17	Walter S. Crosley	18.42	20.82	18.66	3.50	61.40
18	Daniel C. Nutting, Jr.	20.22	18.72	19.02	3.43	61.39
19	William K. Glæe	20.04	17.34	19.14	3.29	60.71
20	William S. Valentine	19.86	15.24	22.14	3.43	60.67
21	John S. Doddridge	20.40	19.68	18.98	3.19	60.25
22	Frank L. Chadwick	19.74	18.78	18.48	3.16	60.16
23	Edward H. Campbell	17.76	21.06	18.06	3.20	60.08
24	Allen M. Cook	19.86	19.02	17.94	3.00	59.82
25	James C. Hooker	19.14	15.90	21.00	3.45	59.49
26	Chester Wells	18.78	18.42	19.56	2.63	59.33
27	Percey N. Olmstead	19.02	18.54	18.54	3.28	59.38
28	Orton P. Jackson	20.16	18.18	17.82	2.94	59.10
29	Thomas S. Wilson	20.46	18.18	18.98	3.19	58.81
30	John R. Brady	18.00	18.00	18.66	2.12	57.68
31	Peter C. Hains, Jr.	18.90	16.44	19.14	3.11	57.59
32	James S. Coleman	16.56	18.48	19.20	3.20	57.44
33	John A. Crocker	19.08	17.34	17.64	3.27	57.33
34	Frank D. W. Read	19.68	15.30	19.20	3.07	57.31
35	Richard S. Douglas	19.14	16.62	18.72	2.77	57.25
36	David M. Berry	18.12	17.22	17.76	3.57	56.67
37	Graham Shaw	18.64	15.96	19.20	1.94	56.00
38	Frank B. Upham	17.52	16.50	18.54	3.37	55.93
39	John R. Morris	17.04	18.66	17.84	2.87	55.91
40	Martin E. French	18.00	17.22	17.46	3.19	55.87
41	Andre N. Procter	17.04	19.44	16.98	2.28	55.74
42	William G. Groesbeck	17.28	15.48	20.46	2.34	55.56
43	William B. Logan	17.34	17.04	18.00	3.07	55.45
44	Gerald L. Holsinger	18.24	16.92	16.62	3.15	55.93
45	John L. Sticht	17.88	17.88	16.26	2.72	55.74

ERRATA.

Martin E. French, { should read { Martin E. French.
Andre N. Procter, { Andre M. Procter.

Merit roll of naval cadets, fourth class (72 members), etc.—Continued.

Order of annual merit.	NAME	English and history.	Algebra and geometry.	French, Spanish, and German.	Discipline	Aggregate.
	Maxima	24	24	24	4	76
46	Worth Bagley	17.76	15.00	18.30	2.80	54.86
47	Richard Stardevant	19.72	15.54	16.38	3.37	54.91
48	Guy T. Scott	17.04	15.78	17.76	3.04	54.92
49	Walter B. Whitman	18.54	15.60	16.86	3.43	54.43
50	Alfred A. McKethan	17.16	17.22	16.74	2.29	54.41
51	Edward C. Stearns	18.06	15.60	16.74	3.53	54.43
52	Louis G. Ashbury, Jr.	16.80	15.00	19.20	2.47	53.47
53	Henry A. Pearson	18.00	15.48	16.20	2.46	52.14
54	Joseph A. Perry	16.38	16.62	16.26	3.44	52.70
55	Christopher C. Fewel	16.74	16.38	16.20	3.09	52.41
56	Marvin Carter	18.00	15.00	18.42	3.11	52.53
57	James B. Potter	16.92	15.30	16.86	2.72	51.80
58	Louis C. Baird	16.62	16.08	16.44	2.24	51.38
59	Alfred A. Pratt	17.10	15.12	16.14	2.46	51.22
60	William C. Wishart	15.68	15.00	17.04	3.16	50.84
61	Andrew J. Cruise, Jr.	16.44	15.84	16.86	1.56	50.70
f	Henry B. Price	19.02	14.58	18.06	3.43	55.10
g	Walter J. Marion	17.04	14.76	19.08	2.44	53.32
h	George W. Ryan	16.20	14.52	18.78	3.17	52.67
i	Louis B. Jones	16.20	14.46	16.92	3.10	50.74
j	Arthur C. Townsend	16.92	14.34	15.72	3.25	50.23
k	Ernest L. Bennett .....	.....	.....	.....	.....	.....
l	John A. Cobb, Jr. ....	.....	.....	.....	.....	.....
m	Henry L. Dailey .....	.....	.....	.....	.....	.....
n	Leland F. James .....	.....	.....	.....	.....	.....
o	Moulton K. Johnson .....	.....	.....	.....	.....	.....
p	William B. Randolph .....	.....	.....	.....	.....	.....

S. S. K.

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.)

III. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

IV. Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be not less than fifteen nor more than twenty years of age, and physically sound, well formed, and of robust constitution.—(*Rev. Stat.*, § 1517, and act of Congress approved March 2, 1889.)

V. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examinations shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."—(*Rev. Stat.*, § 1515.)

VI. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

VII. "Naval cadets found deficient at any examination shall not be continued at the Academy or in the service unless upon the recommendation of the academic board."—(*Rev. Stat.*, § 1519.)

VIII. "The academic course of *naval cadets* shall be six years."—(*Rev. Stat.*, § 1520.)

IX. Candidates who may be nominated in time to enable them to reach the academy by the fifteenth of May will receive permission to present themselves on that date to the superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the academy immediately after passing prescribed examinations.

No leaves of absence will be granted to cadets of the fourth class.

EXAMINATION.

X. Candidates will be examined physically by a board composed of three medical officers of the Navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate; viz.,

- Feeble constitution, inherited or acquired;
 - Retarded development;
 - Impaired general health;
 - Decided cachexia, diathesis, or predisposition to disease;
 - Any disease, deformity, or result of injury that would impair efficiency; such as—
 - Weak or disordered intellect;
 - Cutaneous or communicable disease;
 - Unnatural curvature of spine, torticollis, or other deformity;
 - Inefficiency of either of the extremities or large articulations from any cause;
 - Epilepsy or other convulsions within five years;
 - Impaired vision, disease of the organs of vision, imperfect color sense;
 - Impaired hearing or disease of the ear;
 - Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;
 - Impediment of speech to such an extent as to impair efficiency in the performance of duty;
 - Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
 - Hernia or undescended testis;
 - Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;
 - Disease of the genito-urinary organs;
 - Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.
- Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the academy. In the case of doubt about the physical condition of the candidate any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

Table showing the minimum height for admission for each year between the ages of fifteen and twenty.

Age	15	16	17	18	19	20
Height (inches)	60	60½	61	61½	62½	63

Table showing mean height, weight and chest girth of lads between the ages of fifteen and twenty years.

Age	Height (without shoes).	Weight (including clothes).	Chest (without arms).
	Inches	Pounds	Inches
15	62½	110	34
16	65½	125	36
17	68	140	38
18	69½	146	40
19	69	148	41
20	69	150	42

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or concrete, and to use with facility the tables of money, weights, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon and the relation between the Troy and Avoirdupois pounds and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem which can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The question will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the uses of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; *e. g.*,

"*They were always a strange family; they rarely acted like other people; their he-
were in the right place, but their heads always seemed to be doing anything but w-*"

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ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words; thus,—

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected; thus,—

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to have been there and seen it.* 5. *There's a sweet little cherubim sits up aloft to keep watch for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: the definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain-chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they flow; the position of important seas, bays, gulfs, and arms of the sea; the position of independent states, their boundaries and capital cities; the position and direction of great peninsulas and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands, and colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bodies of water on which cities are situated; the course of a vessel in making a voyage between well known ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other states, and with reference to latitude and longitude, of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and give their positions. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies; royal, proprietary, and charter. Name the colonies that originally existed within the present limits of *Massachusetts*; of *Connecticut*. When were these colonies united? What did the colony of *Pennsylvania* include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the *United States*, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates who pass the physical and mental examinations will receive appointments as naval cadets, and become students at the academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the naval academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles; viz.,

One dress jacket.....	\$17.50	One jack knife	\$0.75
One blouse	10.50	Six sheets	3.36
Two pairs trousers	19.00	Hammock clews.....	.58
Two working suits	1.86	One pair of bathing trunks .....	.20
One overcoat.....	20.50	Three pairs of white thread gloves .....	.60
One rubber coat.....	4.00	Two black silk neckties .....	.64
One rubber hat .....	.53	Two clothes bags .....	.46
Two pairs of regulation leggins..	1.40	One hammock mattress.....	2.85
One parade cap.....	2.55	aOne requisition book.....	.40
One knit cap.....	.66	aOne pass book .....	.40
One ring.....	.10	aStencil, ink, and brush .....	.45
One soap box.....	.62	aOne bottle of indelible ink.....	.18
One laundry book.....	.34	aOne wash basin and pitcher.....	.88
One pair of blankets.....	2.90	aOne pair of gymnasium slippers.....	1.10
Two pairs of high shoes.....	6.84	*One whisk.....	.13
One pair of overshoes.....	.55	*One coarse comb.....	.05
Eight white shirts.....	8.00	*One cake of soap.....	.10
Twelve linen collars.....	2.04	*One hair brush .....	.50
Eight pairs of cuffs.....	2.00	*Stationery .....	.50
*Eight pairs of socks.....	1.84	*Twelve white handkerchiefs	2.76
*Eight towels.....	2.00	*One pair of suspenders.....	.40
*Shaving outfit.....	1.55	*Four night shirts	2.52
*Four pairs of drawers (winter)..	4.00	*One tooth brush.....	.23
bFour pairs of drawers (summer)..	1.52	*Thread and needles.....	.19
*Four undershirts (winter).....	4.00	*Blacking brush and blacking... ..	.30
bFour undershirts (summer).....	1.52	*Nail brush .....	.25
One hand glass.....	.36		
			20.78
	118.68		

When moving into cadet quarters, cadets will supply themselves with the following articles; viz.,

a Two bedspreads	\$2.84	One mirror.....	\$1.20
a Two pairs of drill gloves.....	1.00	a One rug.....	.80
a One slop jar.....	.93	a One hair mattress.....	5.10
a Two spatter-c oths.....	.66	a One broom.....	.25
One hair pillow.....	.75	Six pillow cases	1.38
	6.18		8.73

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice ship; viz.,

Three working suits.....	\$2.79	One pair rubber leggins.....	\$0.40
Four woolen shirts.....	7.40	One pair of high shoes.....	3.41
Three white sailor hats.....	1.14	One knit cap.....	
	11.33		

Articles marked *a* will not be taken on board the practice ship.

Of the articles marked *b* cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.

Each naval cadet must on admission deposit with the pay-officer the sum of \$25, of which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles, beside those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc.	\$15.00
Deposit for books, etc.	20.00
Total amount required	<u>35.00</u>

The value of clothing brought from home is to be deducted from this amount.

Each naval cadet *one month after admission* will be credited with the amount of actual expenses in traveling from his home to the academy.

XIV. A naval cadet who voluntarily resigns his appointment within a year of the time of his admission to the academy will be required to refund the amount paid for traveling expenses.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution.	Todhunter's Higher Algebra.
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenot's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRENCH: "Natural method of teaching languages."	La Parole Française, Sauveur and Van Daell. Bellows's Pocket Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department	Number of recitations a week.	Number of months.	Subjects.	Text-books
<i>Mathematics</i>	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate coefficients and the binomial theorem; permutations and combinations; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations.	Hall and Knight's Higher Algebra Bowditch's Useful Tables.
	2	4	GEOMETRY: Course for first term continued. Spherical geometry, the cone and the cylinder, mensuration of rectilinear figures, and of the sphere, cone, and cylinder, application of algebra to determinate geometry.	Chauvenet's Geometry
<i>English Studies, History and Law</i>	2	4	ENGLISH: Rhetoric and composition; choice and use of words, kinds of composition; narration and description, argumentative composition, exercises in the composition of letters and telegrams. Themes.	A. S. Hill's Rhetoric Ayres's Orthography Ayres's Vocabulary Webster's Dictionary
	2	4	HISTORY: Progress of colonial development in America, and the history of the United States, important points in the naval history of the United States by notes or lectures. Contemporary history, including the comparative study of governments, institutions, and political geography.	Esst's History of the United States Mitchell's Atlas The School Herald Mitchell's Atlas
<i>Modern Languages</i>	5½	4	FRANÇAIS: Natural Method.	Berry: La Langue Française H. Stott's uncorrected copy Bellow's Pocket Dictionary Wornum's First Spanish Book Sesum's Dictionary
			SPANISH: (Given as an advanced course.) Natural Method.	Bellow's Pocket Dictionary Wornum's First Spanish Book Sesum's Dictionary
			GERMAN: (Given as an advanced course.) Natural Method.	Dreyfuss's German Method and German Verb Drill Whitney's Dictionary

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections; representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order.	Church's Descriptive Geometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles, construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenot's Trigonometry; Todhunter's Trigonometry. Bowditch's Useful Tables.
<i>English Studies, History, and Law.</i>	1	4	ENGLISH: Faults in diction and their remedies; selection and arrangement; principles of composition; exercises in the composition of official dispatches, letters, and telegrams; themes.	Abbott's How to Write Clearly. Ayres's Orthoëpist.* Ayres's Verbalist.* Webster's Dictionary.* The School Herald. Mitchell's Atlas.*
	1	4	HISTORY: Contemporary history, including the comparative study of governments, institutions, and political geography.	
	2	4	LAW: Constitution of the United States.	Andrew's Manual of the Constitution.
<i>Modern Languages.</i>	3	4	FRENCH: "Natural method."	Böcher's Series of French Plays. Bercy La Langue Française 2 ^{me} Partie. Bellows's Dictionary.* Sauveur Petite Grammaire. Farras English-Spanish Method. Dreyspring's Cumulative Method and German Verb Drill.
			SPANISH: (Given as an advanced course.) "Natural method." GERMAN: (Given as an advanced course.) "Natural method."	
<i>Mechanical Drawing.</i>	4	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved fig.	Tomkin's Machine Construction.*

SECOND YEAR—THIRD CLASS—Continued.

FIRST TERM—continued.

Department.	No. of recitations a week.	No. of months.	Subjects.	Text-books.
<i>Mechanical Drawing</i> (continued).			lines to scale, drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	

SECOND TERM.

<i>Physics and Chemistry</i>	5	4	<p>Physics: An elementary course intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures.</p> <p>CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory, experimental illustrating the daily recitations, and the determination of simple salts, acids, and bases. Lectures.</p>	<p>Daniel's <i>Principles of Physics</i> <i>Practical Physics</i> Stewart and Taylor</p> <p>Remsen's <i>General Chemistry</i> Remsen's <i>Organic Chemistry</i> Lecture Notes</p>
<i>Mathematics</i>	1	4	<p>DESCRIPTIVE GEOMETRY: Course for first term continued. Warped surfaces, and surfaces of revolution; development of single curved surfaces; intersection of surfaces; tangent lines and planes; projections of the sphere; axonometric projections; solids and shadows.</p> <p>ANALYTICAL GEOMETRY: Equations of the straight line and of the cone sections; transformation of coordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree; equations of the plane of lines in space; and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.</p>	<p>Cutler's <i>Descriptive Geometry</i></p> <p>C. Smith's <i>Conic Sections</i> Aldrich's <i>Geometry</i></p>

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	2	4	<p>FRENCH: Continuation of first term course.</p> <p>SPANISH: Continuation of first term course.</p> <p>GERMAN: Continuation of first term course.</p>	Same as for the first term.
<i>Mechanical Drawing.</i>	2	4	<p>MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, and gearing; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.</p>	Tomkin's Machine Construction.*

THIRD YEAR—SECOND CLASS

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction and Naval Tactics.</i>	1	4	SEAMANSHIP: Description and uses of sails, their fittings and appliances, handling sails, port drills and evolutions; management under sail; duties of officers and crew.	Luce's <i>Seamanship</i> .
<i>Steam Engineering.</i>	3	4	PRINCIPLES OF MECHANISM: Marine engines and boilers. Properties of heat and its application to water; combustion; laws and properties of steam; types of marine boilers; comparative efficiency; names and uses of their attachments; hydrometers; scale and its prevention; types of marine engines including condensers and pumps, with explanation of the use of all the parts; screw propellers and paddle wheels; the indicator and its diagrams; power of the engine and computations relating thereto; casualties; care and management of steam machinery.	Grosvore's <i>Elements of Mechanism</i> . Sennett's <i>Marine Steam Engine</i> .
<i>Mechanics and Applied Mathematics.</i>	5	2	DIFFERENTIAL CALCULUS: Functions, rates, differentials of functions; indeterminate forms; series, maxima and minima, geometrical applications; functions of two or more variables.	Rice and Johnson's <i>Differential Calculus</i> .
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals, quadrature of surfaces, cubature of volumes, rectification of curves, centres of gravity, moments of inertia, planimeters, rules for the approximate determination of areas and volumes, differential equations.	Johnson's <i>Integral Calculus</i> . Johnson's <i>Differential Equations</i> .
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations on simple harmonic motion, wave motions, sound, light, and heat. Practical work in the physical laboratory, experiments illustrating the daily recitations and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses, length of light waves. PHONOGRAPHY. CHEMISTRY: Short course in chemical analysis.	Daniell's <i>Principles of Physics</i> . Ganot's <i>Physics</i> . Stewart's <i>Treatise on Heat</i> . Practical <i>Physics</i> by Stewart and Gree. Kohlrausch's <i>Physics Measurements</i> . Lecture Notes.

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Professional French Reader. Bellows's Pocket Dictionary.* Sauveur Petite Grammaire.* Langage Marin, Anglais-Français.
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings; perspective.	Tomkin's Machine Construction.*

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	1	4	Course of the first term continued.	Same as for the first term.
<i>Astronomy, Navigation and Surveying</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular co-ordinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	White's Astronomy; Chauvenet's Spherical and Practical Astronomy.* Bowditch's Navigator. American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	3½	4	Marine engines and boilers. Course for first term continued.	Sennett's Marine Steam Engine.
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subject.	Text-books.
<i>Physics and Chemistry</i>	4	4	<p>PHYSICS. Recitations in light and heat concluded.</p> <p>Electricity and magnetism commenced.</p> <p>Practical work in the physical laboratory: calibration of thermometers, determination of the hygrometric state of the atmosphere, measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of static and voltaic electricity, setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.</p>	<p>Same as for the first term.</p> <p>Thompson's Electricity and Magnetism.</p> <p>Ayrton's Practical Electricity.</p> <p>Day's Exercises in Electrical Measurements.</p> <p>Lecture Notes.</p>
<i>Modern Languages</i>	1	1	1) FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.	Same as for the first term, and French newspapers.

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	3	4	<p>SEAMANSHIP: Uses of compass, lead, log, and sounding machines; principles of marlinespike seamanship, including cutting, fitting, and reeving rigging; description and uses of sails, their fittings and appliances; stowage and organization; management of boats; handling sails; management under sail and under steam; turning and maneuvering, wharfing, docking, towing, piloting, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; control of behavior among waves, and performance in general.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship, section, and squadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.</p>	<p>Luce's Seamanship. Special Notes and Drawings. Navy Department Pamphlets. White's Manual of Naval Architecture. Thearle's Naval Architecture. Thearle's Theoretical Naval Architecture.</p> <p>Navy and International Signal Books. Fleet Drill Book, (Navy Department.) Welch's Text-book of Naval Architecture.</p>
<i>Ordnance and Gunnery.</i>	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat howitzers and machine guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions. Text-book of Ordnance and Gunnery (Naval Academy publication). Gunnery Drill Book for the New Armaments. (Bureau Ordnance publication.)</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Ordnance and Gunnery—Continued.			INFANTRY TACTICS: School of the soldier; school of the company; school of the battalion; instruction for skirmishers.	Upton's Tactics.
			GUNNERY: The motion of projectiles in a non resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.	Text-book of Ordnance and Gunnery (Naval Academy publication). Exterior Ballistics (Naval Academy publication). Ordnance Notes (Office of Naval Intelligence)
Astronomy, Navigation, and Surveying.	4	4	THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.	Chauvenet's Spherical and Practical Astronomy. Walker's Navigation Bowditch's Navigator American Ephemeris and Nautical Almanac.
			THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle and the mechanical correction of the deviation and heeling errors.	Admiralty Manual for the Deviations of the Compass.
Mechanics and Applied Mathematics	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors fundamental principles of the theory practical methods and formulae independent observations, conditioned observations	Johnson's Method of Least Squares
		3	APPLIED MECHANICS: Elasticity, stress and strain theory of structures strength and deflection of beams beams of uniform resistance	Cotterill's Applied Mechanics

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric light wires; experiments upon induction; practice in photography and micro photography.	Same as for the second class year. Lecture Notes.

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	4	4	Course of the first term continued.	Same as for the first term.
<i>Ordnance and Gunnery.</i>	5	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors which arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas of Noble and Abel connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>The Elastic Strength of Guns (Naval Academy publication).</p> <p>Interior Ballistics (Naval Academy publication).</p> <p>Accuracy and Probability of Fire (Naval Academy publication).</p> <p>Nomenclature of steel B. L. R. guns and carriages and mounts for Hotchkiss guns. (Bureau of Ordnance.)</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	4	4	THEORY OF THE DEVIATION OF THE COMPASS including the nature and causes of the several parts of the deviation, the determination of the vertical and horizontal forces of the earth and the ship, the causes and amount of the heeling error, the changes which take place upon a change of geographical position, the graphic representations of the amount and direction of the forces which act on the needle, and the mechanical correction of the deviation and the heeling errors. Navigation. HYDROGRAPHIC SURVEYING: The instruments used, selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projections; running surveys.	Admiralty Manual for the Deviations of the Compass. Chauvenet's Spherical and Practical Astronomy.* Phelps's Practical Marine Surveying. Projection Tables.
<i>English Studies, History, and Law.</i>	2	4	INTERNATIONAL LAW: The objects, sources, and sanctions of international law, the laws of war, embargo, reprisal, and retorsion; blockade; contraband of war, right of search, ship's papers and nationality; prizes; privateering; piracy, the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters, licenses to trade, recaptures.	Glass's Marine International Law.
<i>Physiology and Hygiene.</i>	4	4	PHYSIOLOGY AND HYGIENE: General description of the human body and its functions: the arrest of hemorrhage; resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction. Fridays 7:30 to 9:30 p. m., additional.)	Brown's Eclectic Physiology.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	2	4	<p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and in the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities.</p>	<p>White's Manual of Naval Architecture. Thearle's Naval Architecture. Thearle's Theoretical Naval Architecture. Welch's Text-book of Naval Architecture. Special Notes and Drawings.</p>
<i>Steam Engineering.</i>	3	4	<p>MARINE ENGINES: General description of modern marine engines and their dependencies; expansion of steam; piston speed and size of cylinders; uses and construction of parts of a marine engine; calculations on twisting and bending moments; principles and construction of condensers and pumps; types of valves and valve gear, and valve diagrams; principles and construction of various types of propellers; the indicator and its diagrams; power of an engine and calculations relating thereto.</p> <p>Objects of test trials; boiler trials and their results; friction of the engine and the dynamometer; standard methods and examples of engine trials.</p>	<p>Seaton's Marine Engineering.</p> <p>Thurston's Engine and Boiler Trials.</p>
	2	4	<p>BOILERS: Various types and efficiency of steam boilers; fuel, combustion, evaporation, and draught; construction of boilers in detail, and materials used; details of fittings and attachments; causes of decay; care and preservation of boilers.</p>	<p>Wilson's Steam Boilers. Shock's Steam Boilers.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Steam Engineering—Continued.</i>	3	4	DESIGNING MACHINERY: The strains to which machinery is subjected and the resistance offered to these strains; relative value of materials used in machinery; testing materials; principles and considerations governing the design, drawing, specifications, and proportion of the various parts of engines and boilers, with practical application in the designing room.	Unwin's Elements of Machine Design. Wilson's Steam Boilers. Shock's Steam Boilers.
<i>Mechanics and Applied Mathematics.</i>	3	4	Same as for the line division.	Same as for the line division.
<i>Physics and Chemistry.</i>	3	4	Same as for the line division.	Same as for the line division.

SECOND TERM.

<i>Seamanship, Naval Construction and Naval Tactics.</i>	3	4	Course of the first term continued.	Same as for the first term.
<i>Steam Engineering.</i>	2	4	MARINE ENGINES: Continuation of first term course. Physical properties of steam; convertibility of heat and work; theory of the steam engine; air and heat engines; efficiency of an engine; theoretical considerations governing the expansion of steam; effects of clearance, wire drawing, jacketing, liquefaction and re-evaporation; experiments on the steam engine, and the methods of determining its efficiency.	Seaton's Marine Engineering. Thurston's Engine and Boiler Trials. Cotterill's Steam Engine Considered as a Heat Machine.
	3	4	BOILERS: Course of the first term continued.	Same as for the first term.
	4	4	DESIGNING MACHINERY: Course of the first term continued.	Same as for the first term.
<i>Mechanics and Applied Mathematics.</i>	3	4	APPLIED MECHANICS: Kinematics and dynamics of machines; transmission and conversion of energy by fluids.	Cotterill's Applied Mechanics. Bower's Hydro-mechanics.
<i>Physics and Chemistry.</i>	3	4	Same as for the line division.	Same as for the line division.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics					1	1	3	4	2	3
Ordnance and Gunnery							3	5		
Astronomy, Navigation, and Surveying						2	4	4		
Steam Engineering					3	3			8	9
Mechanics and Applied Mathematics					5	5	3		3	3
Physics and Chemistry				5 F	4	4	3		3	
Mathematics	6	5	5	5						
English Studies, History, and Law ..	5	5	4					2		
Modern Languages	5	5½	3	2	1 F	½ F				
Mechanical Drawing			4	3½	2					
Physiology and Hygiene								½ F		½ F

F, Friday, 7.30 to 9.30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Departments	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Astronomy, Navigation, and Surveying	M T W Th F (2)	M F S (1), T (3)		M W F S (1)	
English Studies, History, and Law	M T W Th F S (1)	M T W Th F (2)			
Mathematics		M W Th F (3)	T (3) S (1)		
Mechanical Drawing			M T W Th F (1)	M W F (2)	M W F (2)
Mechanics and Applied Mathematics			M (2), F (7.30 to 9.30 p.m.)		
Modern Languages	M T W Th F (3)	T W Th (1)	T W Th F (2)	T Th (2), F (3)	M T Th (1)
Ordnance and Gunnery					
Physics and Chemistry			M (3)	T W Th (3)	T W (3)
Seamanship Naval Construction and Naval Tactics			W Th F (3)		{ W F S (1), T Th (2), M Th F (3) }
Steam Engineering					

SECOND TERM.

Astronomy, Navigation, and Surveying			W F (3)		
English Studies, History, and Law	M T W Th F (3)			M T Th F (1)	
Mathematics	M T W Th F (1)			W (1), F (2)	
Mechanical Drawing		M T W Th F (2)			
Mechanics and Applied Mathematics		M (1), T F (2), S (1)			
Modern Languages	M T W Th F (2), S (1)	W Th (3)	M T W Th F (1)		M T Th (2)
Ordnance and Gunnery			S (1), F (7.30 to 9.30 p.m.)		
Physics and Chemistry		{ M (3), T W Th F (1), F (7.30 to 9.30 p.m.) }	M T Th F (2)	M T W Th (2), F (3)	
Physiology and Hygiene					
Seamanship Naval Construction, and Naval Tactics			W (2)	S (1), F (7.30 to 9.30 p.m.)	S (1), F (7.30 to 9.30 p.m.)
Steam Engineering			M T Th (2)	M T W Th (3)	M W Th (3)
					{ M T W Th F (1), W F S (1), F (2) }

* Lectures and practical instruction

† Saturday period second term from January 31 to March 10

TABLE OF COEFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
Discipline	4	8	12	16	16	100	160		
<i>Seamanship, Naval Construction, and Naval Tactics.</i>									
Seamanship, Ship building, and Naval Tactics			3	13	8		44	56	32
Cruise Reports, Navigation Note Books, Journals, and Station Bills.....								24	36
Practice Cruise.....				2		72			
<i>Ordnance and Gunnery.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery.....									
Ordnance and Gunnery.....				} 15		60		44	
<i>Astronomy, Navigation, and Surveying.</i>									
Astronomy, Navigation, and Surveying.....			3	12			12	44	
Practice Cruise.....				2		68			
<i>Steam Engineering.</i>									
Steam Machinery, Marine Engines, and Boilers			8					20	
Summer Practical Work			3			5	44		
Marine Engines.....						10			88
Designing Machinery.....						12			
Boilers						8	184		56
<i>Mechanics and Applied Mathematics.</i>									
Differential and Integral Calculus, and Mechanics.....			12						
Least Squares and Strength of Materials..				5	5	68			
Mechanics.....					5		88		
<i>Physics and Chemistry.</i>									
Chemistry and Physics.....		5							
Physics			10	5	5	80	80		
<i>Mathematics.</i>									
Algebra and Geometry.....	5								
Trigonometry, Analytical Geometry, and Descriptive Geometry.....		10				60	60		
<i>English Studies, History, and Law.</i>									
English and History.....	5								
English, History, and Law.....		4		4		52	36	24	
<i>Modern Languages.</i>									
French, Spanish, and German.....	5	5	3			52	52	28	28
<i>Mechanical Drawing.</i>									
Mechanical Drawing.....		6	3			36	36		
<i>Miscellaneous.</i>									
Physiology and Hygiene.....				2	2	8	8		
Maxima for each class.....	76	152	228	304	304	760	760	240	240

*In making up the standing for a year the second term is given double the weight of the first term.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

Setting up drill; school of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, boat howitzers, and machine guns; target practice with small arms; target practice afloat with machine guns; rifled howitzers, Hotchkiss rapid-fire guns, and great guns; small-sword exercise; broad-sword exercise; bayonet exercise; handling and firing torpedoes; determination of the strength and elasticity of gun-metal with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the drift; the preparation and inspection of ordnance material.

Two gold medals are awarded annually for marksmanship; one to the cadet of the first class who excels in great-gun practice, and one to the cadet of the second class who excels in practice with the service rifle and revolver.

In June, 1880, the great-gun medal was awarded to Cadet Claude Bailey, of Arkansas. The practice was from the steamer *Standish*, at ranges varying from 1,100 yards to 1,400 yards, with the Hotchkiss 3-pounder and 6-pounder rapid-fire guns. The best three scores were:

	Score.	Percentage
Cadet Bailey	236	74
Cadet Coleman	234	72
Cadet Schofield	192	58

The scoring was on the service-vertical target.

In October, 1880, the small-arms medal was awarded to Cadet Davison, of Missouri. The targets used were the Army A and B for the Hotchkiss rifle, and a rectangle 18 by 24 inches for the revolver. The score was as follows:

	Distance	Percentage of the mass, 200 lbs.
	Yards	
On shore, A target	170	70
From boat, B target	300	52
	Paces	
Revolver, 18 by 24 inch target	0	31

ASTRONOMY, NAVIGATION, AND SURVEYING.

Practical navigation; surveying and constructing a chart of a portion of the Severn River.

Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact co-efficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship.

STEAM ENGINEERING.

Vise-bench work; forging; boiler-making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company (4).	Company (4).	Target great guns (4).	Steam tactics (4).
	2	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battery (4).	Battery (4).	Steam tactics (4).	Target great guns (4).
	4	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	5	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	6	Target great guns (4).	Steam tactics (4).	Company (4).	Company (4).
	7	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
Nov....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam tactics (4).	Target great guns (4).	Battery (4).	Battery (4).
	3	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	5	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec' ...	1	Broadsword.	Steam.	Broadsword.	Steam.
	2	Steam.	Broadsword.	Steam.	Broadsword.
	3	Broadsword.	Steam.	Broadsword.	Steam.
	4	Steam.	Broadsword.	Steam.	Broadsword.
Jan' ...	1	Steam.	Broadsword.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
	5	SEMI-ANNUAL EXAMINATION			
Feb' ...	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadsword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadsword.	Steam.
Mar ...	1	Steam.	Seamanship.	Steam.	Broadsword.
	2	Devil at compass (4).	Devil at compass (4).	Devil at compass (4).	Devil at compass (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
April....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target great guns (4).	Torpedoes (4).	Steam tactics (4).
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Steam tactics (4).	Torpedoes (4).	Target great guns (4).	Skirmish (4).
May....	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Battalion infantry (4).	Battalion infantry (4).	Battalion artillery (4).	Battalion infantry (4).
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
	7	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
	9	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	10	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	11	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	12	General quarters.	General quarters.	General quarters.	General quarters.
	13	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	14	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	15	Seamanship.	Seamanship.	Seamanship.	Seamanship.

ANNUAL EXAMINATION

June 1 to 10

June 10 to 12

Practice cruise.

* During the months of December, January, and February, two (2) Saturday drill periods are devoted to Battalion infantry in place of the usual drill duties.

SECOND CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Target machine guns.	Steam launches.
	2	Battery.	Battery.	Steam launches.	Target machine guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Nov.....	4	Target machine guns.	Steam launches.	Company.	Company.
	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Target machine guns.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy Signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
Jan.....	4				
	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Signals.	Steam.
	3	Steam.	Broadsword.	Steam.	Signals.
	4	Signals.	Steam.	Broadsword.	Steam.
5 SEMI-ANNUAL EXAMINATION.					
Feb.....	1	Steam.	Signals.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
Mar....	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April...	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Small sword (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target great guns (4).	Small sword (4).	Steam tactics (4).
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	7	Steam tactics (4).	Small sword (4).	Target great guns (4).	Skirmish (4).
May....	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Small sword (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
	7	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	9	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	10	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	11	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	12	General quarters.	General quarters.	General quarters.	General quarters.
	13	Small sword.	Small sword.	Small sword.	Small sword.
	14	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	15	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10	ANNUAL EXAMINATION.				

* During the months of December, January, and February, two (2) Saturday drill periods are devoted to battalion infantry, in place of the schedule detail drills.

SECOND CLASS.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	1	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.	Machine shop a. m. Signals p. m.	Machine shop a. m. Target howitzers p. m.
	2	Machine shop a. m. Target howitzers p. m.	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.	Machine shop a. m. Signals p. m.
	3	Machine shop a. m. Signals p. m.	Machine shop a. m. Target howitzers p. m.	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.
	4	Running steam cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine guns p. m.
	5	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.
	6	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.
	7	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.
	8	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.
	9	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.
	10	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.

THIRD CLASS.

Aca- demic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Boats.	Boats.
	2	Battery.	Battery.	Boats.	Boats.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Company.	Company.
Nov.....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Boats.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec*.....	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
	4				
Jan*.....	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Pivot guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Pivot guns.
	4	Pivot guns.	Rigging loft.	Small sword.	Target small arms.
	5	SEMI-ANNUAL EXAMINATION.			
Feb*.....	1	Target small arms.	Pivot guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
Mar.....	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April.....	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target sm'll arms(4).	Skirmish (4).	Seamanship (4).	Boats (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target sm'll arms(4).	Boats (4).	Seamanship.
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship.
	7	Boats (4).	Boats (4).	Target sm'll arms(4).	Skirmish (4).
May.....	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).	Battal'n infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battal'n artillery (3).	Battal'n artillery (3).	Battal'n artillery (3).	Battal'n artillery (3).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Small sword (3).	Small sword (3).	Small sword (3).	Small sword (3).
	8	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	9	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	10	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	11	General quarters.	General quarters.	General quarters.	General quarters.
	12	Boats.	Boats.	Boats.	Boats.
	13	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10.	ANNUAL EXAMINATION.				
June 10 to Aug. 28	Practice cruise.				

* During the months of December, January, and February two (2) Saturday drill periods are devoted to battalion infantry in place of the scheduled detail drills.

FOURTH CLASS

Academic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Company.	Boats	Boats.
	2	Battery.	Battery.	Boats	Boats.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Company.	Company.
Nov....	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Boats.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec*....	1	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	3	Pivot guns.	Rigging loft.	Dancing.	Gymnastics.
	4				
Jan*....	1	Gymnastics.	Pivot guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Pivot guns.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Pivot guns.
	4	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
SEMI-ANNUAL EXAMINATION.					
Feb*....	1	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Dancing.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Dancing.
	4	Dancing.	Rigging loft.	Dancing.	Gymnastics.
Mar....	1	Gymnastics.	Dancing.	Rigging loft.	Dancing.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April.	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship (4).	Seamanship (4).	Seamanship (4).	Seamanship (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Skirmish (4).	Boats (4).	Boats (4).
	5	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	6	Seamanship.	Seamanship.	Gymnastics (4).	Skirmish (4).
May....	1	Boats (4).	Seamanship (4).	Seamanship (1).	Seamanship (1).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	8	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	9	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	10	General quarters.	General quarters.	General quarters.	General quarters.
	11	Boats.	Boats.	Boats.	Boats.
	12	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	13	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10		ANNUAL EXAMINATION			
June 10 to 20		Practice cruise			
Aug 20					
Sept....	1	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	2	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	3	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	4	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.
	5	School of soldier 1	School of soldier 1	School of soldier 1	School of soldier 1
	6	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.	Sch. sec. howitzer.

* During the months of December, January and February two (2) Saturday drill periods are devoted to Battalion infantry in place of the schedule detail drills.
(Swimming day)

SUMMARY OF PRACTICAL INSTRUCTION.

Kind of instruction.	During the academic year.				Total num-ber of in-structions during academic year.	During summer months.				During month of September.	Total num-ber of in-structions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
Seamanship, including stripping and rigging Wyoming	33	80	37	35	135	(*)	.	(*)	(*)	. . . . .	135
Rigging loft .....	.	.	15	15	30	.	.	.	.	.	30
Boats under oars, or sail.....	.	.	15	15	30	(*)	15	(*)	(*)	.	45
Naval tactics with steam launches..	12	4	.	.	16	.	5	.	.	.	21
Navy signals, day.....	.	5	.	.	5	(*)	3	.	.	.	8
Navy signals, night.....	.	.	.	.	.	(*)	3	.	.	.	3
Army signals, day.....	.	5	5	.	10	.	2	.	.	.	12
Army signals, night.....	.	.	.	.	.	.	2	.	.	.	9
Monitor, with great gun practice	4	.	.	.	4	.	.	.	.	.	4
General quarters	7	7	7	7	28	(*)	.	(*)	(*)	.	28
General quarters, with target practice....	4	4	4	4	16	(*)	.	(*)	(*)	.	16
Target practice, great guns.....	8	4	.	.	12	.	5	.	.	.	17
Pivot guns.....	.	.	5	5	10	.	.	.	.	.	10
Broadside guns.....	.	.	5	5	10	(*)	.	(*)	(*)	.	10
Torpedoes	4	.	.	.	4	.	.	.	.	.	4
Practical ordnance	5	5	.	.	10	.	.	.	.	.	10
Howitzers adroit.....	.	.	.	.	.	.	5	.	.	.	5
Target practice, howitzers .....	.	.	.	.	.	.	5	.	.	.	5
School of section.....	.	.	.	.	.	.	.	.	10	.	10
School of battery	4	5	5	5	19	.	.	.	.	.	19
School of battalion artillery.....	9	9	9	9	36	.	.	.	.	.	36
Target practice, machine guns.....	.	5	.	.	5	.	5	.	.	.	10
Target practice, small arms.....	.	.	9	9	9	.	5	.	.	.	14
Target practice, pistols .....	.	.	5	.	5	.	.	.	.	.	5
School of the soldier .....	.	.	.	.	.	.	.	.	24	.	24

SUMMARY OF PRACTICAL INSTRUCTION--Continued.

Kind of instruction	During the academic year.				Total number of instructions during academic year.	During summer months.				Total number of instructions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.	
School of the battalion, infantry	11	11	11	11	44					44
Marksmanship drill	4	4	4	4	16					16
Broadsword	18	9			24					24
Small sword	5	15	18		38					38
Practical instruction in deviation of compass	4				4	(*)				4
Practical instruction, navigating	114	112				(*)				127
Practical instruction, surveying	110									110
Machine-shop and running shop engines	30 and 113	30			60		54			114 and 113
Running steam launches		5			5		6			11
Practical instruction in chemistry			113							113
Gymnastic and boxing				19	19					19
Swimming									24	24
Dancing				20	20					20

* Practice cruise.

† Study periods.

The instructions in seamanship and gunnery on board of the *Wyoming*, *Purcell*, and *Standish* are also made. Instructions in running and managing the engines and boilers of these vessels. The instructions in naval tactics are also made. Instructions in running and managing the engines and boilers of the steam launches when practicable.

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ANNUAL REGISTER

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OF THE

UNITED STATES NAVAL ACADEMY,

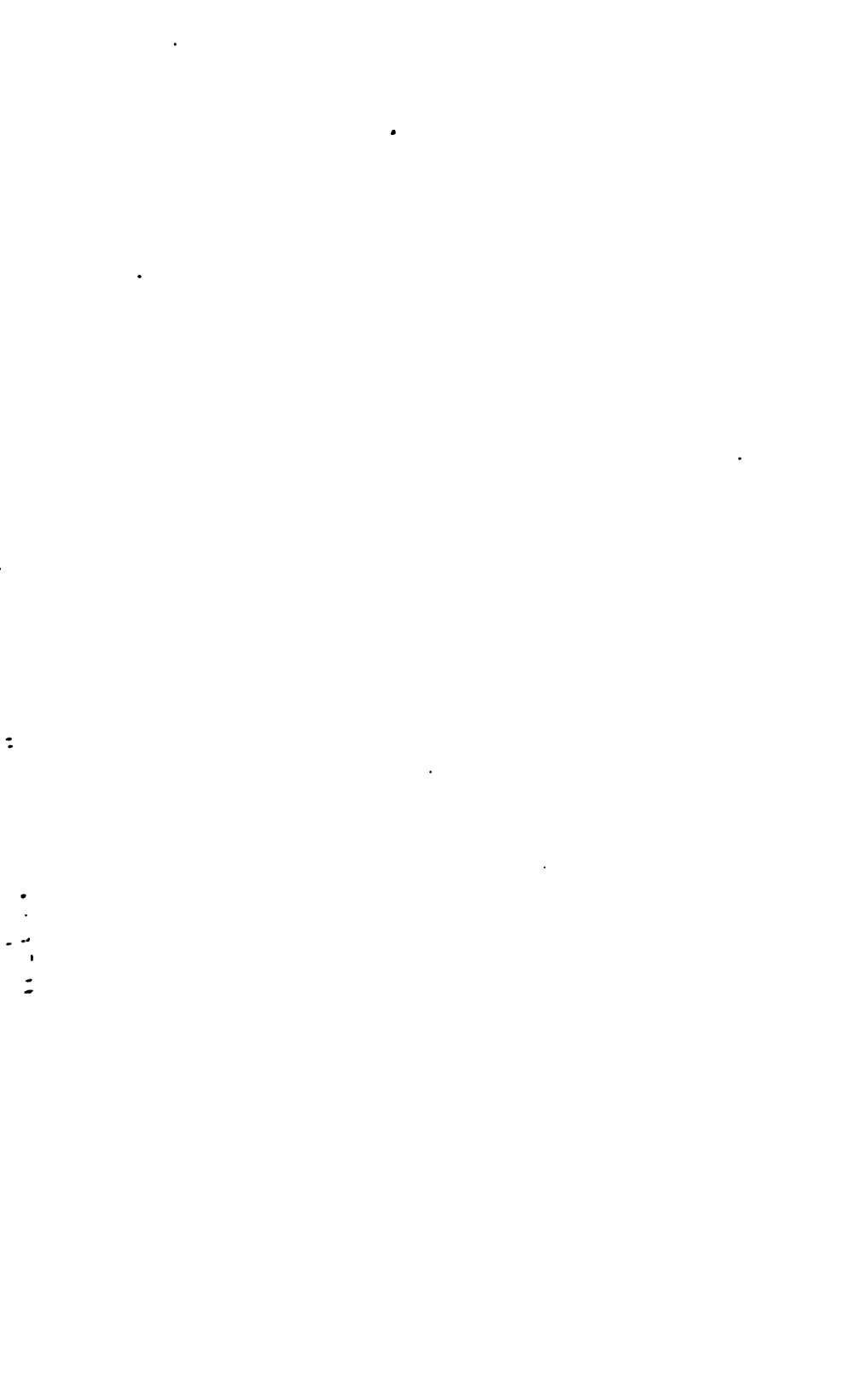
ANNAPOLIS, MD.

FORTY-SEVENTH ACADEMIC YEAR.

1891-'92.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.



ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FORTY-SEVENTH ACADEMIC YEAR.

1891-'92.



WASHINGTON:
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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet.
Captain Henry Brewerton, U. S. Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school, and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following-named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities of training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was moved back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1882, this official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1882.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanics, chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two cadet-engineers who had entered the Academy in 1867. After an interval of four years in October, 1871, a new class of cadet engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and 1873 new classes were admitted, the first of which left the Academy in 1874, and the second in 1875. By an act of Congress, approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and from those who successfully complete the six years' course appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and Engineer Corps of the Navy and of the Marine Corps: And provided further, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year: such appointments to be made from the graduates of the year, at the conclusion of their six years' course, in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a surplus of graduates, those who do not receive such appointment shall be given a certificate of graduation, an honor-

able discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the naval academy, with a proper certificate of graduation."

The act of Congress, approved March 2, 1889, provides that "the academic board of the naval academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the naval academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available."

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years."

SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

Assumed command :

Sept. 3, 1845.—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Upshur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.
June 30, 1890.—Captain R. L. Phythian.

BOARD OF VISITORS, JUNE, 1891.

Hon. W. E. CHANDLER, U. S. Senate, *President*.

Hon. H. A. HERBERT, U. S. House of Representative, *Vice President*.

Hon. I. G. HARRIS	U. S. Senate.
Hon. J. P. DOLLIVER.....	U. S. House of Representatives.
Hon. W. C. WALLACE	U. S. House of Representatives.
Commodore J. A. GREER	U. S. Navy.
Hon. GEORGE N. TILLMAN.....	Nashville, Tennessee.
Hon. A. R. MCGILL	Minneapolis, Minnesota.
Dr. GEORGE W. ATHERTON	Bellefonte, Pennsylvania.
Colonel E. BIERER	Hiawatha, Kansas.
Mr. CHARLES A. COFFIN.....	Boston, Massachusetts.
Mr. H. H. SMITH	Washington, D. C.

ACADEMIC CALENDAR.

1891-1892.

1891.		
Oct.	1.—Beginning of first term	Thursday.
1892.		
Jan.	25-30.—Semi-annual examination	Monday-Saturday.
Jan.	30.—End of first term	Saturday.
May	16.—Examination of candidates for admission as naval cadets	Monday.
May	31.—End of academic year, 1891-'92	Tuesday.
May 30-June 4.	—Annual examination	Monday-Saturday.
Sept.	1.—Examination of candidates for admission as naval cadets	Thursday.
Oct.	1.—Beginning of first term, 1892-'93	Saturday.

The academic months end on the following days :

1891-1892.

October	Oct. 31	February	Feb. 27
November	Nov. 28	March	Mar. 28
December	Dec. 28	April	Apr. 28
January	Jan. 23	May	May 21

1892-1893.

October	Oct. 29	December	Dec. 21
November	Nov. 26	January	Jan. 21

CALENDAR FOR 1891-'92.

SEPTEMBER.							APRIL.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30				24	25	26	27	28	29	30
OCTOBER.							MAY.						
4	5	6	7	8	9	10	1	2	3	4	5	6	7
11	12	13	14	15	16	17	8	9	10	11	12	13	14
18	19	20	21	22	23	24	15	16	17	18	19	20	21
25	26	27	28	29	30	31	22	23	24	25	26	27	28
							29	30	31				
NOVEMBER.							JUNE.						
1	2	3	4	5	6	7				1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25
29	30						26	27	28	29	30		
DECEMBER.							JULY.						
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28	29	30
							31						
JANUARY.							AUGUST.						
3	4	5	6	7	8	9		1	2	3	4	5	6
10	11	12	13	14	15	16	7	8	9	10	11	12	13
17	18	19	20	21	22	23	14	15	16	17	18	19	20
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MARCH.							OCTOBER.						
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27	28	29	30	31			23	24	25	26	27	28	29

OFFICERS

ATTACHED TO THE

UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,

CAPTAIN R. L. PHYTHIAN.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT D. D. V. STUART.

Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT G. A. MERRIAM.

Commandant of Cadets and Head of Department of Discipline,

COMMANDER C. M. CHESTER.

LIEUTENANT J. M. HAWLEY, *Assistant.*

LIEUTENANT G. B. HARBER, *Assistant and Drill Officer.*

LIEUTENANT C. W. BARTLETT, *Assistant and Drill Officer.*

LIEUTENANT C. D. GALLOWAY, *Assistant.*

LIEUTENANT R. H. GALT, *Assistant and Drill Officer.*

LIEUTENANT ALEXANDER SHARP, JR., *Assistant and Drill Officer.*

LIEUTENANT C. A. GOVE, *Assistant and Drill Officer.*

SEAMANSHIP, NAVAL CONSTRUCTION, AND NAVAL TACTICS.

Head of Department,

LIEUTENANT-COMMANDER W. W. GILLPATRICK.

Assistants,

LIEUTENANT W. P. CLASON,

LIEUTENANT C. B. T. MOORE,

LIEUTENANT W. S. BENSON.

Instructor in Boxing, Swimming, and Gymnastics,

MATTHEW STROHM.

ORDNANCE AND GUNNERY.

Head of Department,

LIEUTENANT R. R. INGERSOLL.

Assistants,

LIEUTENANT H. C. GEARING,

LIEUTENANT W. F. FULLAM.

Sword Master.

A. J. CORDEMER.

Assistant Sword Masters,

J. B. ROTE,

O. HEINZ.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Head of Department,

LIEUTENANT C. G. BOWMAN.

Assistants,

LIEUTENANT C. R. HARRIS,

LIEUTENANT EDWARD LLOYD, JR.

STEAM ENGINEERING.

Head of Department,

CHIEF ENGINEER H. W. FITCH.

Assistants,

PASSED ASSISTANT ENGINEER J. K. BARTON,

PASSED ASSISTANT ENGINEER R. G. DENIG,

PASSED ASSISTANT ENGINEER F. J. SCHILL,

PASSED ASSISTANT ENGINEER J. L. GOW,

ASSISTANT ENGINEER B. C. SAMPSON.

MECHANICS AND APPLIED MATHEMATICS.

Head of Department,

LIEUTENANT-COMMANDER J. P. MARRELL.

Assistants,

LIEUTENANT A. C. HODGSON,

LIEUTENANT JOHN HOOK,

LIEUTENANT H. B. KNAPP,

ENGINEER C. M. KROPPER.

PHYSICS AND CHEMISTRY.

Head of Department,

PROFESSOR N. M. TERRY, A. M., PH. D.

Assistants,

LIEUTENANT W. G. CUTLER,
 LIEUTENANT B. T. WALLING,
 LIEUTENANT O. G. DODGE,
 ENSIGN F. K. HILL,
 PROFESSOR C. R. SANGER, A. M., PH. D.

MATHEMATICS.

Head of Department,

LIEUTENANT-COMMANDER HARRY KNOX.

Assistants,

LIEUTENANT J. C. CHESAP,
 LIEUTENANT J. M. ROPER,
 LIEUTENANT J. M. BOWYER,
 ENSIGN H. G. DRESSEL,
 ENSIGN C. S. WILLIAMS,
 ENSIGN G. R. EVANS.

ENGLISH STUDIES, HISTORY, AND LAW.

Head of Department,

COMMANDER J. E. CRAIG.

Assistants,

LIEUTENANT J. B. MILTON,
 LIEUTENANT E. B. UNDERWOOD,
 LIEUTENANT W. F. HALSEY,
 LIEUTENANT J. O. NICOLAON,
 ENSIGN J. H. GIBBONS,
 PROFESSOR W. W. FAY, A. M.

MODERN LANGUAGES.

Head of Department,

LIEUTENANT ROBERT G. PECK.

Assistants,

LIEUTENANT J. T. SMITH,
 PROFESSOR JULES LEROUX,
 ASSISTANT PROFESSOR HIPPOLYTE DALMON,
 ASSISTANT PROFESSOR HENRI MARION,
 ASSISTANT PROFESSOR SAMUEL GARNER, PH. D.

MECHANICAL DRAWING.

Head of Department,

LIEUTENANT H. O. RITTENHOUSE.

Assistants,

LIEUTENANT W. M. IRWIN,
 PROFESSOR MARSHAL OLIVER,
 ASSISTANT PROFESSOR C. F. BLAUVELLE.

BRANCH OF PHYSICAL TRAINING.

In Charge,

PASSED ASSISTANT SURGEON HENRY G. BEYER, M. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

OFFICERS NOT ATTACHED TO ACADEMIC STAFF.

LIEUTENANT W. H. REEDER, *in Charge of Ships.*

MEDICAL INSPECTOR B. H. KIDDER, M. D.

PASSED ASSISTANT SURGEON W. E. DU ROSE, M. D.

PASSED ASSISTANT SURGEON L. W. CURTIS, M. D.

PAY DIRECTOR JAMES FULTON, *Pay Officer.*

PAY DIRECTOR CASPAR SCHENCK, *Commissary and General Storekeeper.*

CHAPLAIN H. H. CLARK.

ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*

J. M. SPENCER, *Assistant Librarian.*

R. M. CHASE, *Secretary.*

GUNNER E. SOMMERS, *Attached to Ships.*

U. S. Naval Cadet Training and Practice Vessel Enterprise.

COMMANDER C. M. CHESTER, *Commanding.*

BOATSWAIN J. S. SINCLAIR.

Mates,

SAMUEL GEE.

O. J. MURPHY.

B. G. PREST.

W. G. SMITH.

MARINE OFFICERS.

CAPTAIN J. M. T. YOUNG, *Commanding Marines.*

FIRST LIEUTENANT H. K. WHITE.

ACADEMIC BOARD.

THE SUPERINTENDENT.

THE COMMANDANT OF CADETS.

THE HEAD OF THE DEPARTMENT OF MANNERSHIP, NAVAL CONSTRUCTION, AND NAVAL TACTICS.

THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.

THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.

THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.

THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.

THE HEAD OF THE DEPARTMENT OF MATHEMATICS.

THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.

THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.

THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

CADET OFFICERS OF THE UNITED STATES NAVAL ACADEMY. 19

CADET LIEUTENANT-COMMANDER,

J. E. McDONALD, JR.

CADET LIEUTENANTS,

H. L. FERGUSON,
W. C. DAWSON,

G. C. DAY,
C. T. JEWELL.

CADET LIEUTENANT AND ADJUTANT,

L. S. THOMPSON.

CADET PASSED ASSISTANT ENGINEERS,

J. D. BRUREY.

CADET MASTERS.

L. McNAMER,
C. L. HUSSEY,

C. F. MACKLIN,
F. L. SAWYER.

CADET ENSIGNS.

J. F. HINES,
J. R. Y. BLAKELY,

G. H. MATHER,
H. A. EVANS.

CADET PETTY OFFICERS OF THE FIRST CLASS.

CADET CHIEF PETTY OFFICER,

J. B. P. PRINGLE.

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
Y. STIRLING, JR.,	T. S. BORDEN,	J. R. CAMPBELL,	J. SHEEHAN,
F. A. TRAUT,	F. R. PAYNE,	B. B. MCCORMICK,	E. S. KELLOGG,
T. H. LOW,	G. O. DAVISON,	G. MALLISON,	J. T. MYERS,
J. H. RUSSELL, JR.	T. L. STITT,	W. BALL,	A. B. DAVIS,
	D. VAN H. ALLEN.	P. SYMINGTON.	A. L. GAMBLE.

CADET PETTY OFFICERS OF THE SECOND CLASS,

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
W. S. MONTGOMERY,	L. J. MAGILL,	F. H. CLARK, JR.,	D. O. NUTTING, JR.,
T. D. PARKER,	W. S. CROSBY,	D. M. BERRY,	H. A. PEARSON,
C. E. FITCH,	W. VAN N. POWELSON,	C. J. LANG,	T. S. KELLOGG,
J. A. PERRY.	M. B. PRUGHET.	F. B. UPHAM.	C. WELLS.

SUMMER CRUISE, 1891.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP CONSTELLATION.

June 6 to August 25.

COMMANDER C. M. CHESTER, *Commanding.*
LIEUTENANT J. M. HAWLEY, *Executive Officer.*
LIEUTENANT J. C. CREWAT, *Navigator.*
LIEUTENANT E. B. UNDERWOOD, *Watch Officer.*
LIEUTENANT C. B. T. MOORE, *Watch Officer.*
LIEUTENANT A. SHARP, JR., *Watch Officer.*
LIEUTENANT H. C. GEARING, *Instructor in Navigation.*

LIEUTENANT B. T. WALLING, *Watch Officer.*
ENSIGN C. S. WILLIAMS, *Watch Officer.*
SURGEON S. H. DICKSON.
PASSED ASSISTANT SURGEON L. M. CURTIS.
ASSISTANT PAYMASTER J. A. MUDD.
CHAPLAIN H. H. CLARK.

NAVAL CADETS.

First Class—Line Division.

Allen, D. Van H.,
Ball, W.,
Bakely, J. R. Y.,
Borden, T. S.,
Campbell, J. R.,
Davis, A. R.,
Davison, G. O.,
Dawson, W. O.,
Day, G. C.,
Evans, H. A.,
Ferguson, H. L.,
Gamble, A. L.,

Hines, J. F.,
Hussey, G. L.,
Jewell, O. T.,
Kellogg, E. S.,
Low, T. H.,
McCormick, B. B.,
McDonald, J. E., Jr.,
Macklin, G. F.,
McNamee, L.,
Mallison, G.,
Mather, G. H.,
Myers, J. T.,

Payne, F. R.,
Pringle, J. R. P.,
Rice, A.,
Russell, J. H., Jr.,
Sawyer, F. L.,
Sheehan, J.,
Stirling, Y., Jr.,
Stitt, T. L.,
Stoyford, F. W.,
Symington, P.,
Thompson, L. S.,
Trout, F. A.

Third Class.

Adams, L. S.,
Baldin, P.,
Baker, H. T.,
Bate, E. L.,
Bennett, E. L.,
Berryman, J. R. (a)
Bookwalter, C. S.,
Bulmer, R. C.,
Chappell, R. H.,
Chester, A. T., (a)
Churchill, W.,
Cone, H. I.,
Cooper, I. T.,
Cox, D. H.,
Crosby, B. G.,
DeLany, K. H.,
England, C.,
Fullinwider, S. P.,
Galbraith, G. S.,
Gelm, G. K.,
Gillis, L. Van G.,

Graham, S. V.,
Griffith, C. W.,
Hinds, A. W.,
Hudgins, J. M.,
Hull, A. T.,
James, L. F.,
Johnson, M. K.,
Jones, L. Burton,
Kavanagh, A. G.,
Lallich, P. M.,
Lane, C. A.,
Luby, J. McC.,
Lyon, F.,
McLean, R.,
McMorris, R. K.,
McNeely, R. W.,
Manson, W. J.,
Meady, R. C.,
Osborn, R. H.,
Perkins, F. K., (a)
Reeves, J. M.,

Ridgely, R. Jr.,
Robert, W. P.,
Roberts, T. G.,
Ryan, G. W., (a)
Sandoz, F. L.,
Scott, W. P.,
Sellers, D. F.,
Shaw, M. J.,
Soow, C. F.,
Spear, R.,
Stone, G. L. P.,
Stone, R.,
Tompkins, J. T.,
Turpin, W. S.,
Walker, H. M.,
Webster, C.,
Whitted, W. S.,
Winn, P. B.,
Winship, R.

Fourth Class.

Baldwin, G. E.,
Bannon, F. M.,
Blandy, K. C.,
Cruse, A. J.,
Deane, R. A.,
Deane, E. P.,
Fairbairn, A. L., (a)

Garrison, D. M.,
Harrison, B. W.,
Loring, H.,
Liscom, A. C.,
Love, J. M.,
Mann, G. H.,
Martin, N. M.,

Pratt, P. L.,
Shen, F. T.,
Vestal, S. G.,
Washington, Pope,
White, H. H.

SYNOPSIS OF THE CRUISE, 1891.

CONSTELLATION.

1. Left, first class, line division, and the third and fourth classes embarked June 6.
2. Arrived at Annapolis June 9.
3. Arrived at Hamden, Conn. June 17.
4. Passed Cape Henry, bound to New London, Conn., June 21.
5. Arrived at New London, Conn., June 29.
6. Left requested stop of Constellation of evolution, July 29.
7. Left to proceed to practice of evolution of evolution July 29.
8. Left to proceed to practice of evolution of evolution at Fisher Island July 30.
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A Transferred to Naval Hospital, New York, July 30.

B Granted leave from ship on July 25.

C Granted leave from ship on August 15.

NAVAL CADETS RETAINED AT THE ACADEMY FOR MACHINE SHOP AND OTHER PRACTICAL INSTRUCTION.

First Class—Engineer Division.

Beuret, J. D.,
Crank, R. K.,
Gibbs, W. D., (r)

Hasbrouck, R. De L.,
Huffington, H. W.,

Moses, S. E.,
Porter, J. S.

Second Class.

Berry, D. M.,
Bisset, E. L.,
Brady, J. R.,
Campbell, E. H.,
Carver, M.,
Chadwick, F. L.,
Clark, F. H., Jr.,
Coleman, J. S.,
Cook, A. M.,
Crocker, J. A.,
Crosley, W. S.,
Doddridge, J. S.,
Douglas, R. S.,
Elder, E. A., (f)
Fewel, O. G.,
Fitch, O. E.,
Gise, W. E.,
Groff, J. G.,

Haina, P. O., Jr.,
Hoblitzelle, W. E.,
Holsinger, G. L.,
Jackson, O. P.,
Kellogg, T. S.,
Lang, C. J.,
McKethan, A. A.,
Magill, L. J.,
Montgomery, W. S.,
Morris, J. R.,
Nutting, D. O., Jr.,
Olmsted, P. N.,
Parker, T. D.,
Pearson, H. A.,
Perry, J. A.,
Peugnet, M. B.,
Pollock, E. R.,
Potter, J. B.,

Powell, W. G.,
Powelson, W. Van N.,
Pratt, A. A.,
Price, H. B.,
Procter, A. M.,
Read, F. De W.,
Rodney, W., (g)
Ryan, J. P. J.,
Scott, G. T.,
Sticht, J. L.,
Sturdevant, R.,
Trench, M. E.,
Upham, F. B.,
Ward, H. H.,
Wells, C.,
Whitman, W. B.,
Wilson, T. S.,
Zillman, C. C. H. (m)

Third Class.

Jones, L. Benson.

Fourth Class.

Takasaki Motoshiko.

ON LEAVE SICK.

Third Class, Asbury, L. G., May 29 to September 20.

Fourth Class, Billings, F. T., June 7 to August 29.

Fourth Class, Emery, A. B., May 25 to September 1.

Fourth Class, DeJarnette, J. D. C., March 15 to May 15, May 22 to September 30.

SUMMARY.

On board United States Practice Ship <i>Constellation</i>	116
Remaining at the Academy	63
Total	179

f Granted leave June 23 to September 30.

g Granted leave March 12 to September 28.

m Granted leave June 1 to September 20.

r Resigned September 3.

CLASSES OF THE NAVAL CADETS

AT THE BEGINNING OF THE ACADEMIC YEAR, 1891-'92.

(Corrected to November 18, 1891.)

*Naval cadets of the class appointed in 1886, performing required service afloat—Law
Division—31 members.*

Order of gen- eral merit.	Name.	State from which appointed.	Date of admission.
01	Rahn, Thomas Francis	Tennessee	May 20, 1886
02	Spear, Lawrence	Ohio	May 19, 1886
3	Coleman, Noah Tunnick	New York	May 21, 1886
4	Schofield, Frank Herman	New York	May 21, 1886
5	Chase, John Valentine	Louisiana	Sept. 28, 1886
6	Gartley, Alonzo	Iowa	May 22, 1886
7	Ziegemeier, Henry Joseph	Ohio	May 21, 1886
8	Davis, Cleland	Kentucky	May 22, 1886
9	Signor, Matt Howland	Nebraska	May 21, 1886
10	Blankenship, John Millington	Virginia	May 20, 1886
11	Buck, William Henry	Mississippi	May 22, 1886
12	Taylor, Montgomery Meigs	At large	May 21, 1886
13	Ritter, Henry Snyder	Pennsylvania	May 28, 1886
14	Williams, George Washington	South Carolina	Sept. 29, 1886
15	Callin, Albertus Wright	Minnesota	May 24, 1886
16	McVay, Charles Butler, Jr.	Colorado	May 19, 1886
17	Vogelmeier, Charles Theodore	California	Sept. 6, 1886
18	Everhart, Lay Hampton	Alabama	May 20, 1886
19	Snow, William Alanson	Massachusetts	Sept. 6, 1886
20	Sullivan, Franklin Buchanan	At large	May 22, 1886
21	Bailey, Claude	Arkansas	Sept. 9, 1886
22	Neville, Wendell Cushing	Virginia	Sept. 13, 1886
23	Mann, Lawrence Henry	New York	Sept. 29, 1886
24	Dayton, John Havens	At large	Sept. 12, 1886
25	Bastwick, Lucius Allen	Massachusetts	Sept. 7, 1886
26	Bond, Charles Otis	Iowa	Sept. 8, 1886
27	Radford, Cyrus Harg	Kentucky	May 22, 1886
28	Treadwell, Thomas Conrad	Massachusetts	May 21, 1886
29	Moffett, William Adger	South Carolina	Sept. 6, 1886
30	Latimer, Julius Lee	West Virginia	Sept. 20, 1886
31	Edie, John Rufus	At large	May 19, 1886

Engineer Division, 3 members.

1	Holmes, Urban Tigner	Arkansas	Sept. 11, 1886
2	Price, Claude Bernard	Mississippi	June 2, 1886
3	Dismukes, Doctor Eugene	Mississippi	May 21, 1886

Naval cadets of the class appointed in 1887, performing required service afloat—Line Division—36 members.

Order of general merit.	Name.	State from which appointed.	Date of admission.
*1	Zehm, Frank Baker	Pennsylvania	Sept. 5, 1887
*2	Gillmer, Horatio Gonzalo	Wisconsin	Sept. 5, 1887
*3	Smith, Henry Gerriah	Ohio	Sept. 5, 1887
*4	Watt, Richard Morgan	Pennsylvania	Sept. 22, 1887
*5	Bolnap, Reginald Rowan	Arkansas	Sept. 5, 1887
*6	Blamer, DeWitt	Iowa	May 19, 1887
7	Stearns, Clark Daniel	Michigan	Sept. 5, 1887
8	Pollock, Edwin Taylor	Ohio	May 20, 1887
9	Kuensli, Henry Charles	Wisconsin	Sept. 6, 1887
10	Willard, Arthur Lee	Missouri	Sept. 7, 1887
11	Christy, Harley Hannibal	Ohio	May 24, 1887
12	Hartung, Benwick John	Iowa	Sept. 6, 1887
13	Hough, Henry Hughes	Massachusetts	Sept. 6, 1887
14	Irwin, Noble Edward	Ohio	Sept. 29, 1887
15	Smith, Lucien Greathouse	Illinois	June 3, 1887
16	Evans, Waldo	Kansas	Sept. 7, 1887
17	Moale, John Gray Foster	California	Sept. 6, 1887
18	McLemore, Albert Sidney	Tennessee	May 23, 1887
19	Senn, Thomas Jones	South Carolina	May 19, 1887
20	Bierer, Blon Barnett	Kansas	Sept. 24, 1887
21	Caldwell, Harry Handy	Illinois	Sept. 7, 1887
22	Preston, Charles Francis	Maryland	Sept. 6, 1887
23	Williams, Dion	Ohio	July 16, 1887
24	Lane, Rufus Herman	Ohio	June 2, 1887
25	Sypher, Jay Hale	Arizona	Sept. 5, 1887
26	Leigh, Richard Henry	Mississippi	Sept. 6, 1887
27	Macfarland, Horace Greeley	New York	Sept. 6, 1887
28	Brotherton, William Daniel	Wisconsin	Sept. 6, 1887
29	Althouse, Adelbert	Illinois	May 21, 1887
30	Carter, James Francis	Pennsylvania	March 24, 1887
31	McKelvy, William Nemler	Pennsylvania	May 20, 1887
32	Smith, Harry Eaton	Ohio	May 20, 1887
33	Theall, Elisha	New York	May 28, 1887
34	Blount, Irving	Indiana	Sept. 6, 1887
35	Richards, George	Ohio	Sept. 12, 1887
36	Gross, Louis Herman	Illinois	May 19, 1887

Engineer Division—7 members.

1	Robison, John Keeler	Michigan	May 20, 1887
2	Rowen, John Howard	Pennsylvania	Sept. 27, 1887
3	Reed, Milton Eugene	Iowa	Sept. 5, 1887
4	Enrich, Charles Rulf	Illinois	May 19, 1887
5	McGrann, William Hugh	Tennessee	May 20, 1887
6	Shepard, George Hugh	Wisconsin	Sept. 27, 1887
7	Laws, George William	Iowa	May 21, 1887

Naval Cadets of the First Class—Line Division—34 members.

Name.	State from which appointed.	Date of admission.	Time served in previous ships.	
			Months.	Days.
Allen, David Van Horn	Tennessee	Sept. 6, 1887	8	5
Ball, Walter	New York	Sept. 6, 1886	6	2
Biskaly, John Russell Young	Pennsylvania	Sept. 29, 1888	4	2
Borden, Thomas Sheppard	Louisiana	Sept. 25, 1888	4	2
Campbell, Joseph Randolph	Wyoming	Sept. 29, 1888	4	2
Davis, Austin Rockwell	Georgia	May 21, 1888	7	1
Davison, Gregory Caldwell	Missouri	May 22, 1888	7	1
Dawson, William Charles	Missouri	Sept. 6, 1888	4	2
Day, George Calvin	Vermont	May 19, 1888	7	1
Evans, Holden A.	Florida	Sept. 5, 1888	4	2
Ferguson, Homer Lenoir	North Carolina	May 21, 1888	7	1
Gamble, Aaron Lichtenberger	Indiana	Sept. 5, 1888	4	2
Hines, John Fere	Kentucky	May 1, 1888	7	1
Hussey, Charles Lincoln	New Hampshire	May 21, 1888	7	1
Jewell, Charles Theodore	At large	May 19, 1887	7	1
Kellogg, Edward Stanley	New York	Sept. 5, 1888	3	2
Low, Theodore Henry	Connecticut	May 18, 1888	7	1
McCormick, Benjamin Bernard	New York	May 19, 1888	7	1
McDonald, Joseph Buckiel	Illinois	Sept. 7, 1888	4	2
Macklin, Charles Fearnie	New York	Sept. 25, 1888	4	2
McNamee, Luke	Kansas	Sept. 6, 1888	4	2
Mallison, George	North Carolina	May 21, 1888	7	1
Mather, George Herbert	New Jersey	May 22, 1888	7	1
Myers, John Twigg	Georgia	Sept. 27, 1887	5	1
Payne, Fred Rounselle	New York	May 21, 1888	7	1
Pringle, Joel Roberts Poinsett	Illinois	Sept. 6, 1888	4	2
Russell, John Henry, Jr.	At large	May 18, 1888	5	1
Sawyer, Frederick Lewis	Illinois	Sept. 6, 1888	4	2
Sheehan, James	New York	May 21, 1888	7	1
Stirling, Yates, Jr.	Massachusetts	Sept. 6, 1888	4	2
Stitt, Thomas Lutz	Indiana	Sept. 5, 1888	4	2
Symington, Powers	West Virginia	Sept. 17, 1888	4	2
Thompson, Leon Seymour	Ohio	May 21, 1888	7	1
Trout, Frederick Augustus	Connecticut	May 19, 1888	7	1

Engineer Division—6 members.

Burton, John Deagal	Ohio	Sept. 7, 1888	1	2
Crank, Robert Kyle	Texas	Sept. 6, 1888	1	2
Hastings, Raymond De Lancy	Idaho	Sept. 25, 1888	1	2
Hutton, Howard Williams	Pennsylvania	May 19, 1888	4	2
Moss, Sanford Elwood	Georgia	Sept. 6, 1888	1	2
Porter, John Singleton	Tennessee	Sept. 25, 1888	1	2

Naval Cadets of the Second Class—51 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Berry, David Mark	California	Sept. 6, 1889	2	22
Bisnet, Eugene Leo	Kentucky	Oct. 2, 1889	2	22
Brady, John Richard	Pennsylvania	Sept. 6, 1889	2	22
Campbell, Edward Hale	Indiana	Sept. 6, 1889	2	22
Carver, Marvin	Minnesota	Sept. 27, 1889	2	22
Chadwick, Frank Laird	Minnesota	May 18, 1889	4	19
Clark, Frank Hodges, jr	Rhode Island	Sept. 5, 1889	2	22
Coleman, James Samuel	Alabama	Sept. 5, 1889	2	22
Cook, Allen Merriam	Kansas	May 22, 1889	4	14
Crocker, John Archdell	Pennsylvania	May 22, 1889	4	19
Crosley, Walter Belwyn	Connecticut	Sept. 5, 1889	2	22
Doddridge, John Sehon	West Virginia	Sept. 7, 1889	2	22
Douglas, Richard Spencer	Georgia	June 3, 1889	4	19
Elder, Edwin Avery	Massachusetts	May 21, 1889	4	19
Fewel, Christopher Catron	Texas	Oct. 2, 1889	2	22
Fitch, Claude Eames	Illinois	Sept. 7, 1889	2	22
Glee, William Kern	Illinois	June 14, 1889	4	19
Groff, Joseph Coblenz	Maryland	Oct. 3, 1889	2	22
Hains, Peter Conover, jr	District of Columbia	May 18, 1889	4	19
Holsinger, Gerald Long	Kansas	Oct. 3, 1889	2	22
Jackson, Orton Porter	Pennsylvania	May 18, 1889	4	19
Kellogg, Thomas Steele	At large	Oct. 19, 1889	2	22
Lang, Charles Jonas	Pennsylvania	Sept. 6, 1889	2	22
McKethan, Alfred Augustus	North Carolina	Sept. 5, 1889	2	22
Magill, Louis John	Pennsylvania	Nov. 11, 1889	2	22
Montgomery, William Slack	Kentucky	Sept. 5, 1889	2	22
Morris, John Ramsey	Missouri	Sept. 7, 1889	2	22
Nutting, Daniel Chapin, jr	Kansas	May 21, 1889	4	19
Olmsted, Percy Napier	Oregon	May 21, 1889	1	27
Parker, Thomas Drayton	South Carolina	Oct. 3, 1889	2	22
Pearson, Henry Allen	Utah	Sept. 6, 1889	2	22
Perry, Joseph Albert	Illinois	Sept. 6, 1889	2	22
Pengnet, Maurice Berthold	Missouri	Sept. 7, 1889	2	22
Pollock, Emmett Riddle	Illinois	May 18, 1888	4	17
Potter, James Boyd	New Jersey	Sept. 5, 1889	2	22
Powell, William Glasgow	New Jersey	May 18, 1889	2	22
Powelson, Wilfrid Van Nest	New York	Sept. 5, 1889	2	22
Pratt, Alfred Allen	Illinois	Sept. 7, 1889	2	22
Price, Henry Bertrand	Iowa	May 20, 1889	4	14
Procter, André Morton	Kentucky	Sept. 6, 1889	2	22
Read, Frank De Witt	Ohio	Sept. 6, 1889	2	22
Rodney, Warren	Texas	Sept. 6, 1888	1	27
Ryan, John Paul Joseph	New York	May 22, 1889	2	22
Scott, Guy Terrell	Nebraska	Sept. 7, 1889	2	22
Sticht, John Low	New York	Sept. 7, 1889	2	22
Sturdevant, Richard	Pennsylvania	Sept. 6, 1889	2	22
Trench, Martin Edward	Minnesota	Oct. 3, 1889	2	22
Upham, Frank Brooks	Montana	Sept. 6, 1889	2	22
Ward, Henry Heber	New Jersey	Sept. 7, 1889	2	22
Wells, Chester	Pennsylvania	Nov. 15, 1889	0	0
Wilson, Thomas Sheldon	Illinois	May 20, 1889	4	1

Naval Cadets of the Third Class—61 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Adams, Lawrence Stowell	Pennsylvania	Sept. 26, 1890	2	23
Babin, Provost	New York	Sept. 6, 1890	2	13
Baker, Henry Thomas	Ohio	Oct. 7, 1890	2	13
Bennett, Ernest Linwood	Massachusetts	Sept. 24, 1890	2	23
Berryman, John Russell	Ohio	May 22, 1890	2	6
Bookwalter, Charles Sumner	Illinois	Sept. 8, 1890	2	13
Bulmer, Roscoe Carlyle	Nevada	Sept. 26, 1890	2	13
Chappell, Ralph Hubert	Michigan	May 22, 1890	2	13
Chester, Arthur Tremaine	At large	May 19, 1890	1	23
Churchill, Winston	Missouri	May 21, 1890	2	13
Coe, Hutch Ingham	Florida	Sept. 6, 1890	2	13
Cooper, Ignatius Taylor	Delaware	May 20, 1890	2	13
Cox, Daniel Hargate	New York	Sept. 9, 1890	2	13
Crosby, Benjamin Gratz	At large	Sept. 26, 1890	2	23
De Lany, Edwin Hayden	Tennessee	May 21, 1890	2	23
England, Clarence	Arkansas	Sept. 8, 1890	2	13
Fallinawider, Simon Peter	Missouri	May 21, 1890	2	13
Gairbairn, Gilbert Smith	Pennsylvania	Sept. 8, 1890	2	13
Gelm, George Earl	New York	May 22, 1890	2	13
Gilts, Brin Van Gorder	New York	Sept. 6, 1890	2	23
Graham, Steven Victor	Michigan	May 19, 1890	2	13
Griffith, Claude Willis	Maryland	Sept. 8, 1890	2	23
Hinds, Alfred Walton	Alabama	Sept. 6, 1890	2	13
Hodgins, John Melton	Virginia	Sept. 8, 1890	2	13
Hull, Alexander Thomas	Virginia	May 21, 1890	2	23
Jones, Leland Frieron	South Carolina	Sept. 9, 1890	2	13
Johnson, Moulton Kinsinger	Ohio	June 10, 1890	2	13
Jones, Lewis Bruce	New York	May 21, 1890	4	16
Jones, Lewis Burton	New York	May 21, 1890	2	13
Kavanaugh, Arthur Glynn	Nebraska	May 20, 1890	2	23
LaBach, Paul Mayer	North Dakota	Sept. 26, 1890	2	23
Lane, Charles Arthur	Missouri	May 20, 1890	2	13
Luby, John McClane	Texas	Sept. 6, 1890	2	13
Lyon, Frank	Kentucky	May 20, 1890	2	24
McLenn, Ridley	Tennessee	May 20, 1890	2	13
McMorris, Bulging Kavanaugh	Alabama	Sept. 15, 1890	2	13
McNewly, Robert Whitehead	North Carolina	Sept. 8, 1890	2	13
Manion, Walter James	Louisiana	Sept. 6, 1890	2	13
Moody, Roscoe Charles	Maine	Sept. 8, 1890	2	13
Osborn, Robert Hatfield	New York	May 22, 1890	2	23
Portins, Frederick King	California	June 11, 1890	1	8
Reeves, Joseph Mason	Illinois	Sept. 8, 1890	2	13
Ridgely, Randolph, Jr.	Georgia	May 21, 1890	2	13
Robert, William Pierre	Mississippi	May 20, 1890	2	13
Roberts, Thomas Gaines	Alabama	May 17, 1890	2	23
Ryan, George Whitehouse	Massachusetts	June 12, 1890	4	8
Sanders, Fritz Louis	Louisiana	May 19, 1890	2	13
Scott, William Pitt	Pennsylvania	May 20, 1890	2	13
Sellon, David Fots	New Mexico	May 21, 1890	2	13
Shaw, Melville Jones	Minnesota	Sept. 6, 1890	2	13

Naval Cadets of the Third Class—61 members—Continued.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Snow, Carlton Farwell	Maine	May 19, 1890	2	23
Spear, Roscoe	Pennsylvania	May 23, 1890	2	23
Stone, George Loring Porter	Georgia	Sept. 26, 1890	2	23
Stone, Raymond	Alabama	Sept. 5, 1890	2	23
Tompkins, John Thomas	Louisiana	Sept. 6, 1890	2	23
Turpin, Walter Stevens	Maryland	May 22, 1890	2	23
Walker, Henry Mallory	South Dakota	Sept. 8, 1890	2	23
Webster, Charles	Massachusetts	Sept. 6, 1890	2	23
Whitted, William Scott	North Carolina	May 20, 1890	2	22
Winn, Philip Bird	Kentucky	Sept. 12, 1890	2	23
Winship, Emory	Georgia	June 3, 1890	2	23

Naval Cadets of the Fourth Class—84 members.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in previous ships.	
			Years.	Months.	Months.	Days.
Allison, Louis Beach	Michigan	Sept. 9, 1891	19	4	0	0
Bagley, Worth	North Carolina	Sept. 7, 1891	17	5	0	0
Baldwin, Frank Pardee	New Jersey	Sept. 8, 1891	17	11	0	0
Baldwin, George Ellsworth	Missouri	May 21, 1891	19	4	2	0
Bannon, Philip Michael	Maryland	May 19, 1891	19	2	2	22
Barnes, Cassius Bartlett	Oklahoma	Sept. 7, 1891	19	8	0	0
Bennett, Kenneth Marratt	New Jersey	Sept. 8, 1891	16	9	0	0
Bigelow, Harry Maurice	Maine	Sept. 8, 1891	18	11	0	0
Billings, Frederick Tremaine	New York	May 22, 1891	17	10	0	0
Blandy, Edwin Chauncey	Pennsylvania	May 19, 1891	18	8	2	13
Breckinridge, Joseph Cabell	Kentucky	Sept. 8, 1891	19	6	0	0
Brumby, Frank Hardeman	Georgia	Sept. 8, 1891	16	11	0	0
Butler, Henry Varnum, Jr.	New York	Sept. 5, 1891	17	6	0	0
Carmody, Robert Elbridge	New York	Sept. 12, 1891	17	10	0	0
Cruss, Andrew Jackson, Jr.	Pennsylvania	May 22, 1891	18	4	2	22
Cushman, William Reynolds	New York	Sept. 5, 1891	16	4	0	0
Davidson, William Christopher	South Dakota	Sept. 28, 1891	19	2	0	0
Deane, Russell Andrews	New York	May 19, 1891	17	0	2	11
De Jarnette, James Daniel Coleman	Virginia	Sept. 8, 1890	17	9	0	0
Demmitt, Stanley Pullen	Maine	Sept. 5, 1891	18	2	0	0
Dick, Thomas Murritt	South Carolina	Sept. 5, 1891	18	5	0	0
Dodge, Eugene Prince	New York	May 22, 1891	15	6	2	22
Dunn, Edward Howard	Connecticut	Sept. 5, 1891	18	5	0	0
Eckhardt, Ernst Frederick	Wisconsin	Sept. 5, 1891	18	9	0	0
Emery, Arthur Ballard	New Hampshire	May 21, 1890	17	7	0	0
Fairbrother, Arthur Lewis	Rhode Island	May 21, 1891	17	11	1	20
Fellows, Richard J.	Michigan	Sept. 29, 1891	19	10	0	0
Freeman, Frederic Newton	Indiana	Sept. 9, 1891	15	9	0	0
Garrison, Daniel Mershon	New Jersey	June 1, 1891	17	1	2	21
Ghorardt, Walter Rockwell	At large	Sept. 4, 1891	16	1	0	0
Gordon, Walter Ingels	Indiana	Sept. 24, 1891	18	1	0	0
Groesbeck, William Gerard	Ohio	Sept. 4, 1891	17	0	0	0
Hall, West Hamill	Texas	Sept. 7, 1891	18	8	0	0
Harrison, Bruce William	Wisconsin	May 21, 1891	18	10	2	22
Henry, James Buchanan, Jr.	New York	Sept. 22, 1891	15	8	0	0
Hook, Herman Whitelaw	Kansas	Sept. 10, 1891	19	4	0	0
Inard, Walter Blake	South Carolina	Sept. 7, 1891	18	3	0	0
Johnston, Rufus Zeno, Jr.	North Carolina	Sept. 10, 1891	17	2	0	0
Karna, Franklin D.	Ohio	Sept. 20, 1891	17	9	0	0
Kearney, Thomas Albert	Missouri	Sept. 8, 1891	16	6	0	0
Kleemann, John Valentine	New York	Sept. 10, 1891	16	10	0	0
Knepper, Otto Smith	Pennsylvania	Sept. 4, 1891	16	3	0	0
Lanning, Harris	Illinois	May 19, 1891	17	7	2	22
Lawson, Arthur Clark	Michigan	May 20, 1891	17	4	2	21
Love, James Monroe, Jr.	Virginia	May 20, 1891	16	3	2	21
McGinnis, Michael James	Michigan	Sept. 8, 1891	17	10	0	0
McKay, Frank Lodge	Michigan	Sept. 20, 1891	17	3	0	0
Walker, Charles King	Tennessee	Sept. 25, 1891	16	1	0	0
Mallory, Hugh	Alabama	Sept. 8, 1891	16	10	0	0
Wann, George Hiram	Pennsylvania	Sept. 6, 1891	18	2	2	23
Wheeler, Newton	Ohio	Sept. 7, 1891	17	11	0	0
Will, John Francis, Jr.	Texas	Sept. 8, 1891	17	8	0	0

Naval Cadets of the Fourth Class—84 members—Continued.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
Martin, Nathaniel Macon	Virginia	May 19, 1891	19	8	2	23
Merritt, Darwin Robert	Iowa	Sept. 10, 1891	19	4	0	0
Mitchell, Mason Edward	Arkansas	Sept. 9, 1891	17	8	0	0
Monaghan, John Robert	Washington	Sept. 7, 1891	18	5	0	0
Morgan, Alfred	Missouri	Sept. 8, 1891	19	6	0	0
Morton, James Proctor	Missouri	Sept. 9, 1891	17	7	0	0
Noyes, Lauren Addison	Wisconsin	Sept. 10, 1891	18	8	0	0
Olsen, Mack Herman	Wisconsin	Sept. 10, 1891	17	11	0	0
Pratt, Peter Lloyd	Iowa	May 19, 1891	16	5	2	23
Raby, James Joseph	Michigan	Sept. 9, 1891	16	11	0	0
Rucker, William James	Illinois	Sept. 12, 1891	18	4	0	0
Sayers, Joseph Draper, jr	New York	Sept. 5, 1891	16	6	0	0
Shea, Patrick Francis	New York	May 21, 1891	18	3	2	23
Sheffield, Fletcher Lamar	Georgia	Sept. 7, 1891	15	6	0	0
Shirley, Rufus	New York	Sept. 9, 1891	18	1	0	0
Smith, Stuart Farrar	Pennsylvania	Sept. 4, 1891	16	10	0	0
Standley, William Harry	California	Sept. 7, 1891	18	8	0	0
Takasaki, Motohiko	Empire of Japan	May 20, 1891	17	9	0	0
Terrell, William Alford	Texas	Sept. 24, 1891	19	2	0	0
Todd, David Wooster	California	Sept. 8, 1891	17	2	0	0
Vestal, Samuel Curtis	Indiana	May 19, 1891	18	1	2	23
Volkmar, Walter Schuyler	Pennsylvania	Sept. 4, 1891	17	3	0	0
Vollmer, Frederick	Iowa	Sept. 10, 1891	16	11	0	0
Wadhams, Albion James	New York	Sept. 4, 1891	16	4	0	0
Walker, Charles Henry	Massachusetts	Sept. 8, 1891	17	10	0	0
Walker, James Erling	North Carolina	Sept. 7, 1891	17	0	0	0
Washington, Pope	North Carolina	May 29, 1891	18	8	2	23
Watson, Edward Howe	Kentucky	Sept. 7, 1891	17	6	0	0
White, Henry Harrison	Iowa	May 21, 1891	18	5	2	23
Williams, Harry Craig	Mississippi	Sept. 9, 1891	16	7	0	0
Winfield, John Buckner	Virginia	Sept. 8, 1891	15	10	0	0
Woods, Edward	Massachusetts	Sept. 8, 1891	15	9	0	0

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

November 18, 1891.

	Members.
First Class { Line Division	34
{ Engineer Division	6
Second Class	51
Third Class	61
Fourth Class	84
Total	236

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RELATIVE STANDING OF NAVAL CADETS FOR 1890-'91.

Classes of the Naval Cadets at the United States Naval Academy, at the close of the Academic year 1890-'91; with the relative standing of the members in each class, as determined at the annual examination, June, 1891.

P Physically disqualified for the naval service.

** Received 85 per cent. of the multiple.*

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for Engineer Division.

l Honorably discharged at end of four years' course.

r Resigned.

s Sick.

Relative Standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.
90	Allen, David Van Horn	Tennessee	Sept. 6, 1887
31	Althaus, Adelbert	Illinois	May 21, 1887
94	Belknap, Reginald Rowan	Arkansas	Sept. 8, 1887
25	Bierer, Elton Barnett	Kansas	Sept. 24, 1887
6	Blamer, De Witt	Iowa	May 19, 1887
39	Blount, Irving	Indiana	Sept. 6, 1887
32	Brotherton, William Daniel	Wisconsin	Sept. 6, 1887
23	Caldwell, Harry Handly	Illinois	Sept. 7, 1887
27	Carter, James Francis	Pennsylvania	Mar. 24, 1887
17	Christy, Harley Hannibal	Ohio	May 24, 1887
14	Evans, Waldo	Kansas	Sept. 7, 1887
122	Flowers, Robert Lee	North Carolina	Sept. 7, 1887
92	Gillmore, Horatio Gossale	Wisconsin	Sept. 8, 1887
17	Groce, Louis Herman	Illinois	May 19, 1887
12	Hartung, Benwick John	Iowa	Sept. 6, 1887
13	Hough, Henry Hughes	Massachusetts	Sept. 6, 1887
16	Irwin, Noble Edward	Ohio	Sept. 23, 1887
134	Kochersperger, Frank Henry	Pennsylvania	May 20, 1888
19	Kuenzli, Henry Charles	Wisconsin	Sept. 6, 1887
24	Lane, Rufus Herman	Ohio	June 2, 1887
26	Leigh, Richard Henry	Mississippi	Sept. 6, 1887
15	Macfarland, Horatio Greeley	New York	Sept. 6, 1887
35	McKiver, William Newler	Pennsylvania	May 20, 1887
33	McLenore, Albert Selmer	Tennessee	May 23, 1887
21	Mallo, John Gray Foster	California	Sept. 6, 1887
111	Nindle, Daniel Benjamin	Indiana	May 20, 1887
60	Nire, Kagikazu	Empire of Japan	May 21, 1887
9	Pollack, Edwin Taylor	Ohio	May 20, 1887
30	Prinson, Charles Francis	Maryland	Sept. 6, 1887
38	Riardo, George	Ohio	Sept. 12, 1887
19	Senn, Thomas Jones	South Carolina	May 19, 1887
36	Smith, Harry Eaton	Ohio	May 20, 1887
93	Smith, Henry Gerrish	Ohio	Sept. 5, 1887
37	Smith, Lucretia Catharine	Illinois	June 2, 1887
8	Stearns, Clark Daniel	Michigan	Sept. 7, 1887
29	Snyder, Jay Hale	Arizona	Sept. 7, 1887
24	Thom, John	New York	May 20, 1887
95	Watt, Richard Morgan	Pennsylvania	Sept. 22, 1887
7	Wilford, Arthur Lee	Missouri	Sept. 7, 1887
10	Williams, Dea	Ohio	July 16, 1887
91	Zahn, Frank Robert	Pennsylvania	Sept. 8, 1887

^a Japanese student. Withdrawn at the end of the four years' course.

Line Division—41 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.										Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship, naval construction, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Discipline.		
17	3	a	41	a	a	24	a	a	a	a	a	95	1
18	0	30	22	35	23	19	25	37	21	36	28	48	31
16	3	4	1	5	6	11	9	5	5	21	2	5	4
17	6	28	39	29	14	8	23	30	33	35	31	71	25
15	4	14	26	4	5	1	2	7	8	12	29	39	6
17	6	38	40	38	33	32	37	34	37	37	35	77	39
15	11	23	28	24	30	35	18	29	36	20	36	98	32
14	7	22	11	19	16	28	15	18	24	26	37	87	23
18	0	30	16	27	24	14	32	25	30	15	30	56	27
16	8	26	23	8	10	5	22	10	27	29	22	31	17
17	10	16	25	16	8	9	10	8	34	19	17	26	14
16	10	23	21	24	33	21	18	27	17	18	10	4	22
17	8	1	5	1	4	10	3	1	1	2	4	6	2
16	2	39	36	32	39	35	32	39	26	32	34	59	37
17	0	10	4	16	20	16	20	17	22	30	6	1	12
16	8	7	12	15	14	19	34	22	23	8	8	4	13
18	0	19	6	13	18	13	8	21	17	23	25	56	16
16	3	29	26	37	36	30	35	27	28	21	33	67	34
16	4	12	34	12	8	4	7	14	6	11	22	22	10
16	7	20	20	20	29	40	24	32	7	13	32	49	24
17	1	37	17	26	27	23	29	26	35	34	17	13	28
14	8	13	14	10	17	26	14	15	11	14	20	22	15
17	11	34	32	38	25	28	39	30	15	31	22	32	35
18	0	36	36	34	37	37	30	33	29	38	21	44	33
16	8	16	7	29	21	26	31	20	19	27	7	5	21
16	10	8	38	9	11	18	6	6	14	15	26	37	11
17	8	40	24	40	40	41	40	40	40	40	38	122	36
16	7	15	10	14	7	6	12	13	16	25	14	22	9
16	4	34	31	29	30	34	28	34	32	28	16	16	30
15	7	32	30	32	33	39	26	34	30	17	40	164	38
15	5	25	32	23	11	17	11	19	24	39	19	17	19
17	5	33	28	36	37	25	36	38	39	32	27	49	36
17	5	3	19	2	2	2	1	3	10	7	3	0	3
17	6	20	34	21	27	31	16	16	3	4	12	14	20
17	8	11	9	7	13	15	20	12	19	10	8	0	8
16	6	16	7	22	22	32	27	23	12	5	39	148	29
14	5	27	18	28	30	22	37	24	37	24	13	14	26
16	3	5	13	6	3	7	5	10	8	6	10	5	5
17	7	5	2	11	19	11	16	4	2	1	4	10	7
17	5	9	15	18	25	37	13	9	13	9	15	72	18
16	3	2	3	2	1	3	4	2	4	3	1	3	1

Relative Standing of the Naval Cadets of the First Class—

Order of annual meet.			
	Name.	State from which appointed.	Date of admission.
4	Burich, Charles Relf	Illinois	May 19, 1887
7	Lowe, George William	Iowa	May 31, 1887
6	McGrann, William Hugh	Tennessee	May 30, 1887
2	Reed, Milton Eugene	Iowa	Sept. 5, 1887
1	Robison, John Keefer	Michigan	May 30, 1887
3	Rowen, John Howard	Pennsylvania	Sept. 27, 1887
6	Shepard, George Hugh	Wisconsin	Sept. 27, 1887

Engineer Division—7 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.										
Years.	Months.	Naval construction.	Designing machinery.	Marine engines.	Bollers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics and chemistry.	Physiology and hygiene.	Discipline.	Number of demerits.	Order of annual merit.
16	8	4	5	4	4	3	5	6	4	2	87	4
17	3	6	7	6	7	6	6	6	5	5	125	7
17	7	5	4	7	5	4	4	5	1	3	94	5
17	10	3	2	2	1	2	7	1	2	1	38	2
16	6	1	1	1	2	5	1	2	7	6	143	1
16	6	2	3	3	3	1	2	3	6	4	125	3
15	9	7	6	5	6	7	3	4	3	7	125	6

Relative standing of the Naval Cadets of the Second

Order of annual merit.	Name.	State from which appointed.	Date of admission.
32	Ball, Walter	New York	Sept. 6, 1900
31	Beuret, John Douglas	Ohio	Sept. 7, 1900
14	Blakely, John Russell Young	Pennsylvania	Sept. 23, 1900
†	Borden, Thomas Sheppard	Louisiana	Sept. 25, 1900
3	Breckinridge, Joseph Cabell	Kentucky	Sept. 5, 1900
10	Campbell, Joseph Randolph	Wyoming	Sept. 23, 1900
23	Crank, Robert Kyle	Texas	Sept. 6, 1900
24	Davis, Austin Rockwell	Georgia	May 21, 1900
6	Davison, Gregory Caldwell	Missouri	May 22, 1900
15	Dawson, William Charles	Missouri	Sept. 6, 1900
7	Day, George Calvin	Vermont	May 19, 1900
3	Dennett, Stanley Pullen	Maine	May 19, 1900
13	Evans, Holden A	Florida	Sept. 8, 1900
26	Ferguson, Homer Lester	North Carolina	May 21, 1900
31	Gambie, Aaron Lichtenberger	Indiana	Sept. 8, 1900
37a	Gibbs, Washington Dorsey	Mississippi	May 16, 1900
35b	Hastbrouck, Raymond De Lancy	Idaho	Sept. 25, 1900
17	Hines, John Fore	Kentucky	May 21, 1900
37c	Hobbs, William Edward	Missouri	Sept. 6, 1900
23	Hullington, Howard Williams	Pennsylvania	May 19, 1900
9	Humby, Charles Lincoln	New Hampshire	May 21, 1900
12	Jewell, Charles Theodore	At large	May 19, 1900
25	Kellogg, Edward Stanley	New York	Sept. 8, 1900
36	Low, Theodore Henry	Connecticut	May 16, 1900
28	McCormick, Benjamin Bernard	New York	May 19, 1900
22	McDonald, Joseph Knobel	Illinois	Sept. 7, 1900
37	Marshall, Charles Farnum	New York	Sept. 25, 1900
8	McNamee, Luke	Kansas	Sept. 6, 1900
20	Mallison, George	North Carolina	May 21, 1900
34	Mather, George Herbert	New Jersey	May 22, 1900
22	Moss, Stanford Elwood	Georgia	Sept. 6, 1900
20	Myers, John Twigg	Georgia	Sept. 27, 1900
18	Payne, Fred Bonnaville	New York	May 21, 1900
30	Polack, Emmett Noble	Illinois	May 16, 1900
34	Porter, John Singleton	Tennessee	Sept. 25, 1900
27	Pringle, Joel Roberts Polson	Illinois	Sept. 6, 1900
30	Rice, Arthur	Indiana	Sept. 7, 1900
30	Rodney, Warren	Texas	Sept. 6, 1900
†	Russell, John Henry, Jr	At large	May 16, 1900
11	Sawyer, Frederick Lewis	Illinois	Sept. 6, 1900
19	Sheridan, James	New York	May 21, 1900
33	Stirling, Yates, Jr	Massachusetts	Sept. 6, 1900
29	Stitt, Thomas Lutz	Indiana	Sept. 8, 1900

Class—48 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.									Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Discipline.		
16	1	29	26	24	35	22	20	42	32	44	181	32
17	7	12	1	1	4	1	1	8	1	10	47	21
16	2	33	13	17	52	4	14	11	2	27	81	14
16	6	23	41	37	34	40	28	9	24	21	59	†
16	6	43	43	44	49	44	44	17	44	39	139	2
16	6	18	6	10	6	11	8	13	3	8	29	10
16	8	37	28	30	22	25	21	15	25	36	111	23
16	9	41	37	29	55	18	35	22	23	32	97	24
17	0	13	14	7	13	3	10	31	23	24	59	6
17	8	11	7	19	15	20	12	1	26	10	33	15
16	6	3	9	5	12	5	13	19	17	12	44	7
15	11	41	44	40	39	42	43	38	42	33	103	2
16	9	6	3	12	10	13	16	17	23	2	13	13
15	2	5	9	8	39	5	5	2	11	18	51	25
15	10	44	42	25	44	32	31	27	29	21	55	31
16	3	27	35	32	54	15	37	36	43	45	195	38
17	2	36	27	33	17	37	40	35	15	33	99	35
17	7	19	15	14	17	23	24	40	13	2	8	17
17	1	a	a	a	26	a	a	a	a	a	26	17
15	9	1	11	2	25	14	6	30	6	7	16	23
17	3	8	11	8	2	9	15	14	11	5	11	9
15	2	4	10	11	38	8	10	28	5	23	70	12
17	11	23	39	20	11	34	36	43	27	15	40	25
17	8	35	18	40	35	26	19	33	30	40	106	36
15	3	29	38	37	20	38	41	6	18	15	31	26
16	6	2	2	4	5	2	3	21	7	1	9	22
17	5	38	28	39	35	27	38	43	37	25	61	37
17	5	7	5	14	24	7	7	10	10	2	9	8
17	4	23	30	27	41	29	18	31	34	37	114	28
15	1	8	22	30	44	31	25	37	40	33	111	34
16	0	23	31	28	6	38	31	7	13	20	50	22
16	8	29	21	23	20	21	28	25	20	29	56	20
16	9	33	32	13	26	12	4	33	45	43	179	18
15	5	a	a	a	30	a	a	a	a	a	25	1
15	8	20	4	3	9	10	2	23	15	26	74	24
15	7	20	19	35	20	27	31	4	41	31	76	27
17	3	40	35	20	31	43	41	20	4	8	21	1
17	1	a	a	a	46	a	a	a	a	a	42	1
15	6	14	40	43	42	33	28	41	35	12	27	†
17	4	10	7	6	15	16	8	25	19	6	14	11
15	8	17	24	25	31	24	22	16	9	27	91	19
16	4	27	23	30	49	17	31	38	38	41	161	33
15	1	38	33	36	31	34	36	25	21	19	37	

Relative Standing of the Naval Cadets of the Second

Order of annual merit.	Name.	State from which appointed.	Date of admission.
17	Stopford, Frederick William	Massachusetts	May 15, 1888
20	Symington, Powers	West Virginia	Sept. 7, 1888
16	Thompson, Leon Seymour	Ohio	May 21, 1888
21	Trant, Frederick Augustus	Connecticut	May 19, 1888
14	Zillman, Christian Charles Herman	Missouri	Sept. 27, 1888

Class—48 members—Annual Examination, June, 1891—Continued.

Age at date of admission.		Order of merit.									Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Discipline.		
15	7	14	33	40	47	40	38	24	39	42	177	†
15	11	22	25	34	51	34	23	8	33	29	79	80
14	0	16	17	18	13	19	17	12	31	15	35	16
16	11	32	20	14	26	30	25	5	7	37	102	21
17	8	a	a	a	1	a	a	a	36	12	34	P

Relative Standing of the Naval Cadets of the Third

Order of annual merit.	Name.	State from which appointed.	Date of admission.
17	Asbury, Louis George, Jr.	Louisiana	Sept. 7, 1900
18	Bagley, Worth	North Carolina	Sept. 5, 1900
19	Baird, Lewis Conway	Indiana	Sept. 6, 1900
20	Berry, David Mark	California	Sept. 6, 1900
21	Bimet, Eugene Lee	Kentucky	Oct. 2, 1900
22	Brady, John Richard	Pennsylvania	Sept. 6, 1900
23	Campbell, Edward Hale	Indiana	Sept. 6, 1900
24	Carver, Marvin	Minnesota	Sept. 27, 1900
25	Chadwick, Frank Laird	Minnesota	May 18, 1900
26	Clark, Frank Hedges, Jr.	Rhode Island	Sept. 5, 1900
27	Coleman, James Samuel	Alabama	Sept. 5, 1900
28	Cook, Allen Merriam	Kansas	May 22, 1900
29	Crocker, John Archibell	Pennsylvania	May 22, 1900
30	Cumley, Walter Selwyn	Connecticut	Sept. 9, 1900
31	Dalldridge, John Nelson	West Virginia	Sept. 7, 1900
32	Douglas, Richard Spencer	Georgia	June 3, 1900
33	Elder, Edwin Avery	Massachusetts	May 21, 1900
34	Fewel, Christopher Catron	Texas	Oct. 2, 1900
35	Fitch, Claude James	Illinois	Sept. 7, 1900
36	Giss, William Kern	Illinois	June 14, 1900
37	Grossberg, William Gerard	Ohio	Sept. 5, 1900
38	Groff, Joseph Coblentz	Maryland	Oct. 3, 1900
39	Hains, Peter Conover, Jr.	District of Columbia	May 10, 1900
40	Holsinger, Gerald Long	Kansas	Oct. 3, 1900
41	Jackson, Orton Porter	Pennsylvania	May 10, 1900
42	Jones, Lewis Benson	New York	May 21, 1900
43	Kellogg, Thomas Steele	At large	Oct. 19, 1900
44	Lang, Charles James	Pennsylvania	Sept. 6, 1900
45	McKeehan, Alfred Augustus	North Carolina	Sept. 5, 1900
46	Magill, Louis John	Pennsylvania	Nov. 11, 1900
47	Montgomery, William Black	Kentucky	Sept. 5, 1900
48	Morris, John Ramsey	Missouri	Sept. 7, 1900
49	Netting, Daniel Chapin, Jr.	Kansas	May 21, 1900
50	Olmsted, Percy Napier	Oregon	May 21, 1900
51	Parker, Thomas Drayton	South Carolina	Oct. 2, 1900
52	Parson, Henry Allen	Utah	Sept. 6, 1900
53	Perry, Joseph Albert	Illinois	Sept. 6, 1900
54	Pouquet, Maurice Barthold	Missouri	Sept. 7, 1900
55	Potter, James Boyd	New Jersey	Sept. 5, 1900
56	Powell, William Glasgow	New Jersey	May 10, 1900
57	Powelson, Wilfrid Van Nest	New York	Sept. 5, 1900
58	Pratt, Alfred Allen	Illinois	Sept. 7, 1900
59	Price, Henry Bertrand	Iowa	May 2, 1900
60	Proctor, Andre Morton	Kentucky	Sept. 6, 1900

Class—56 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.						Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.		
19	10	a	a	a	a	a	a	35	Pr
15	5	52	50	50	20	52	50	162	2r
18	2	54	54	59	54	38	53	230	2r
17	7	35	17	39	37	11	14	16	27
18	1	8	4	6	3	25	45	108	*7
16	11	23	25	36	23	25	38	82	25
16	11	3	25	42	37	28	45	142	16
18	5	41	41	31	53	29	43	97	42
17	2	24	27	34	17	50	32	90	33
17	9	6	16	15	12	7	1	33	*6
16	3	42	51	52	28	43	24	41	†
18	8	11	31	19	47	10	19	56	18
17	3	39	43	51	47	34	44	119	44
17	10	13	13	13	15	32	9	19	11
17	1	7	9	9	34	41	28	52	15
17	10	36	44	36	24	42	35	93	38
16	9	4	6	5	5	3	27	57	*3
15	11	22	23	45	37	53	50	117	40
17	0	14	2	18	6	1	15	17	*5
18	0	27	23	8	8	17	31	68	21
15	0	49	53	54	25	37	55	276	2r
19	4	9	22	11	11	34	26	71	12
17	4	29	29	46	35	14	15	44	31
19	3	38	36	31	29	51	40	77	43
15	9	19	33	31	18	21	15	52	23
16	6	a	a	55	a	a	36	64	†a
18	2	15	32	16	15	21	21	39	17
19	10	12	15	17	12	1	40	95	10
17	10	39	41	42	51	39	21.	30	41
18	9	5	9	14	3	9	4	24	*4
16	1	1	1	3	42	12	4	26	*1
19	8	18	12	35	31	49	29	33	30
19	9	25	3	2	7	18	6	18	*8
17	10	44	48	49	44	24	1	23	36
18	2	17	14	9	2	39	29	65	13
19	8	33	27	19	41	34	6	17	32
15	10	10	30	36	37	29	15	29	20
18	7	32	20	7	1	6	9	29	*9
16	8	46	44	42	33	54	47	121	48
17	8	42	47	58	22	4	38	107	36
17	0	2	5	1	9	15	3	27	*2
16	2	46	38	28	49	45	52	144	45
19	11	34	19	4	14	7	6	18	1
16	2	38	34	55	52	21	54	262	

Relative Standing of the Naval Cadets of the Third

Order of annual merit.	—		
	Name.	State from which appointed.	Date of admission.
37	Reed, Frank De Witt	Ohio	Sept. 6, 1899
38	Ryan, John Paul Joseph	New York	May 22, 1899
46	Scott, Guy Terrell	Nebraska	Sept. 7, 1899
47	Stearns, Edward Cheever	Ohio	May 21, 1899
39	Sticht, John Low	New York	Sept. 7, 1899
34	Sturdevant, Richard	Pennsylvania	May 6, 1899
36	Trench, Martin Edward	Minnesota	Oct. 3, 1899
33	Upham, Frank Brooks	Montana	Sept. 6, 1899
14	Ward, Henry Heber	New Jersey	Sept. 7, 1899
29	Wells, Chester	Pennsylvania	Nov. 18, 1898
17	Whitman, Walter Bloomfield	Texas	May 20, 1899
22	Wilson, Thomas Sheldon	Illinois	May 20, 1899

Class—56 members—Annual Examination, June, 1891—Continued.

Age at date of admission.		Order of merit.						Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.		
19	2	47	36	41	21	29	40	77	37
19	9	29	30	30	26	5	38	74	26
16	3	44	46	40	49	46	43	131	46
17	8	53	52	48	42	15	13	42	3
16	5	31	39	25	46	44	36	64	39
17	7	50	34	25	36	19	19	29	34
19	10	26	11	27	45	20	24	38	24
17	0	19	40	22	18	48	9	22	23
18	3	15	7	22	10	13	48	197	14
19	1	27	8	19	27	38	33	114	29
18	6	51	49	22	29	46	9	26	17
18	1	21	18	13	32	26	21	46	22

Relative standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed.	Date of admission.
30	Adams, Lawrence Stowell	Pennsylvania	Sept. 25, 1900
Pr 47	Andrews, Claude Norton	Iowa	Sept. 8, 1900
914	Babin, Provost	New York	Sept. 6, 1900
42	Baker, Henry Thomas	Ohio	Oct. 7, 1900
Pr	Baldwin, Murray	Texas	Sept. 27, 1900
Pr	Batta, Edward Lee	Texas	May 22, 1900
16	Bennett, Ernest Linwood	Massachusetts	Sept. 24, 1900
59	Berryman, John Russell	Ohio	May 22, 1900
40	Bookwalter, Charles Sumner	Illinois	Sept. 8, 1900
39	Bulmer, Rufus Carlyle	Nevada	Sept. 29, 1900
80	Chappell, Ralph Hubert	Michigan	May 22, 1900
43	Chester, Arthur Tremaine	At large	May 19, 1900
17	Churchill, Winston	Missouri	May 21, 1900
32	Cone, Hutch Ingham	Florida	Sept. 5, 1900
21	Cooper, Ignatius Taylor	Delaware	May 20, 1900
93	Cox, Daniel Hargate	New York	Sept. 9, 1900
Pr	Craven, Thomas Tingey	Tennessee	Sept. 27, 1900
51	Crosby, Benjamin Grist	At large	Sept. 29, 1900
Pr	DeJarnette, James Daniel Coleman	Virginia	Sept. 9, 1900
Pr	DeKay, Eckford Craven	New York	Sept. 29, 1900
54	DeLaury, Edwin Hayden	Tennessee	May 21, 1900
Pr	Emery, Arthur Ballard	New Hampshire	May 22, 1900
55	England, Clarence	Arkansas	Sept. 5, 1900
30	Fallinwider, Simon Peter	Missouri	May 21, 1900
52	Gallbraith, Gilbert Smith	Pennsylvania	Sept. 6, 1900
57	Gilm, George Earl	New York	May 22, 1900
94	Gillis, Irvin Van Gorder	New York	Sept. 6, 1900
19	Graham, Steven Victor	Michigan	May 19, 1900
Pr	Greer, George Tate	Virginia	May 20, 1900
54	Griffith, Claude Willis	Maryland	Sept. 6, 1900
24	Hinde, Alfred Walton	Alabama	Sept. 6, 1900
23	Hutgins, John Melton	Virginia	Sept. 8, 1900
910	Hull, Alexander Thomas	Virginia	May 21, 1900
Pr	Isard, Walter Blake	South Carolina	Sept. 10, 1900
2	James, Roland Brewster	South Carolina	Sept. 9, 1900
24	Johnson, Moulton Kinsinger	Ohio	June 10, 1900
15	Jones, Lewis Burton	New York	May 21, 1900
22	Kavanagh, Arthur Glynn	Nebraska	May 20, 1900
Pr	Lafach, Paul Meyer	North Dakota	Sept. 29, 1900
45	Lane, Charles Arthur	Missouri	May 20, 1900
29	Leke, John McCane	Texas	Sept. 6, 1900
41	Levin, Frank	Kentucky	May 20, 1900
95	McGowan, Michael James	Michigan	May 22, 1900
96	McLennan, Ridley	Tennessee	May 20, 1900
17	McMurtre, Belling Kavanagh	Alabama	Sept. 10, 1900

Class—72 members—Annual Examination, June, 1891.

Age at date of admission.		Order of merit.					Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Number of demerits.	
16	7	36	50	17	40	49	30
16	6	58	64	24	61	71	P 47
18	0	11	3	34	14	21	*14
16	4	44	35	46	48	54	42
17	11	66	27	65	69	250	2
17	11	63	51	56	21	16	3
17	10	24	13	14	23	33	16
17	11	59	66	49	67	164	59
16	10	49	26	41	48	47	40
16	11	41	32	43	30	32	39
18	11	29	52	59	33	25	50
16	9	17	52	62	14	25	43
18	6	26	16	8	46	76	17
19	4	25	36	43	23	31	32
17	11	12	25	33	23	17	21
17	6	7	5	4	4	14	*3
17	2	63	58	67	48	66	2
18	8	54	67	27	43	39	51
17	9	a	a	a	a	87	7
17	3	68	65	55	65	150	2
19	2	50	44	62	65	168	56
17	7	a	a	a	a	20	7
18	2	33	20	43	59	79	35
18	9	10	21	36	10	10	20
18	5	50	55	46	30	25	52
19	7	56	60	64	42	60	57
15	8	3	29	19	10	30	*8
16	2	22	23	9	56	71	19
18	5	52	69	69	62	87	2
17	11	45	60	51	58	44	54
16	1	15	29	25	48	60	24
18	10	6	52	34	45	50	23
15	5	16	7	6	33	39	*10
17	4	69	32	60	37	27	2
17	0	35	23	13	59	94	25
19	6	57	29	30	33	35	38
17	5	17	11	10	27	43	15
19	4	8	23	28	64	145	22
18	0	62	43	57	56	42	†
19	3	42	40	57	33	32	45
16	4	31	46	18	45	32	29
16	1	39	49	39	63	131	49
16	7	65	62	68	42	42	1
17	6	6	7	20	14	17	
18	6	20	13	38	37	36	

Relative standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed.	Date of admission.
31	McNeely, Robert Whitehead	North Carolina	Sept. 3, 1893
32	Manion, Walter James	Louisiana	Sept. 3, 1893
33	Mann, George Hiram	Pennsylvania	Sept. 3, 1893
34	Moody, Roscoe Charles	Maine	Sept. 3, 1893
35	Osburn, Robert Hatfield	New York	May 22, 1893
36	Parkins, Frederick King	California	June 11, 1893
37	Reeves, Joseph Mason	Illinois	Sept. 3, 1893
38	Ridgely, Randolph, Jr.	Georgia	May 21, 1893
39	Robert, William Pierre	Mississippi	May 20, 1893
40	Roberts, Thomas Gaines	Alabama	May 21, 1893
41	Ryan, George Whitehouse	Massachusetts	June 12, 1893
42	Sandoe, Fritz Louis	Louisiana	May 19, 1893
43	Scott, William Pitt	Pennsylvania	May 20, 1893
44	Sellers, David Fusto	New Mexico	May 21, 1893
45	Shaw, Melville Jones	Minnesota	Sept. 3, 1893
46	Snaw, Carlton Farwell	Maine	May 19, 1893
47	Spur, Roscoe	Pennsylvania	May 22, 1893
48	Stone, George Loring Porter	Georgia	Sept. 24, 1893
49	Stone, Raymond	Alabama	Sept. 3, 1893
50	Tompson, John Thomas	Louisiana	Sept. 3, 1893
51	Turpin, Walter Stevens	Maryland	May 21, 1893
52	Walker, Henry Mallory	South Dakota	Sept. 3, 1893
53	Watson, Edward Howe	Kentucky	Sept. 24, 1893
54	Webster, Charles	Massachusetts	Sept. 3, 1893
55	Whitted, William Scott	North Carolina	May 22, 1893
56	Winn, Philip Bird	Kentucky	Sept. 12, 1893
57	Winship, Emory	Georgia	June 2, 1893

Class—72 members—Annual Examination, June, 1891—Continued.

Age at date of admission.		Order of merit.					Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Number of demerits.	
17	1	39	18	40	21	25	31
17	9	9	17	7	10	36	*9
18	4	a	a	a	a	22	†
17	6	47	46	22	48	62	37
16	6	47	38	31	9	15	23
17	6	17	36	31	68	211	34
17	10	53	56	53	18	23	53
18	8	28	32	21	14	23	28
18	10	4	2	16	1	9	*2
19	9	2	1	11	23	47	*1
18	10	27	21	12	4	7	18
18	3	34	13	1	3	11	*11
16	11	43	42	41	18	17	41
16	4	23	12	4	4	7	*12
18	1	20	4	2	10	20	*7
16	2	61	44	49	30	28	†
18	4	38	19	22	40	50	26
15	2	46	57	37	45	52	48
17	1	14	6	8	2	17	*6
19	11	1	9	26	18	39	*4
16	8	54	58	53	42	43	55
19	6	60	67	66	26	5	58
16	7	67	39	48	37	33	†
16	8	13	10	14	7	8	*12
19	10	31	41	60	23	25	44
19	4	29	62	51	7	8	46
18	3	37	48	28	45	56	36

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

December 13, 1890, to November 18, 1891.

APPOINTED ENSIGNS JULY 1, 1891.

Naval Cadet Hoff, Arthur Bainbridge	Class of 1899
Naval Cadet Twining, Nathan Crook	Class of 1899
Naval Cadet Hutchison, Benjamin Franklin	Class of 1899
Naval Cadet Kittelle, Sumner Ely	Class of 1899
Naval Cadet Pratt, William Veazie	Class of 1899
Naval Cadet Marvell, George Ralph	Class of 1899
Naval Cadet Magruder, Thomas Pickett	Class of 1899
Naval Cadet MacDougall, William Dugald	Class of 1899
Naval Cadet Bradshaw, George Brown	Class of 1899
Naval Cadet de Steiguer, Louis Rudolph	Class of 1899
Naval Cadet Phelps, William Woodward	Class of 1899
Naval Cadet Kaiser, Louis Anthony	Class of 1899
Naval Cadet Cole, William Carey	Class of 1899
Naval Cadet Brand, Charles Augustine	Class of 1899
Naval Cadet Williams, Philip	Class of 1899
Naval Cadet Terhune, Warren Jay	Class of 1899
Naval Cadet Mitchell, George Grant	Class of 1899
Naval Cadet Harrison, William Kelley	Class of 1899
Naval Cadet Fermier, George Lucien	Class of 1899

APPOINTED ASSISTANT ENGINEERS JULY 1, 1891.

Naval Cadet Nulton, Louis McCoy	Class of 1899
Naval Cadet Patton, John Bryson	Class of 1899
Naval Cadet Danforth, George Washington	Class of 1899
Naval Cadet Carney, Robert Ernest	Class of 1899

APPOINTED ASSISTANT NAVAL CONSTRUCTORS JULY 1, 1891.

Naval Cadet Hobson, Richmond Pearson	Class of 1899
Naval Cadet Rock, George Henry	Class of 1899

APPOINTED SECOND LIEUTENANTS U. S. MARINE CORPS JULY 1, 1891.

Naval Cadet Lucas, Lewis Clark	Class of 1899
Naval Cadet Neumann, Bertram Stansbury	Class of 1899
Naval Cadet Long, Charles Grant	Class of 1899
Naval Cadet Fuller, Ben Hebard	Class of 1899
Naval Cadet Offley, Cleland Nelson	Class of 1899
Naval Cadet Dutton, Robert McMillan	Class of 1899
Naval Cadet Prochaska, Julius	Class of 1899
Naval Cadet Lowndes, Edward Rutledge	Class of 1899

HONORARILY DISCHARGED JUNE 30, 1891, UPON THEIR OWN APPLICATION, WITH CERTIFICATE OF GRADUATION, AT THE END OF THE FOUR YEARS' COURSE.

Naval Cadet Flowers, Robert Lee	Class of 1891
Naval Cadet Kochersperger, Frank Henry	Class of 1891
Naval Cadet Ninde, Daniel Benjamin	Class of 1891

WITHDRAWN JUNE, 1891, AT THE END OF THE FOUR YEARS' COURSE.

Naval Cadet Nire, Kagekazu..... Japanese student.

RESIGNED.

Naval Cadet Talcott, Arthur Jewell, fourth class	Jan. 14, 1891
Naval Cadet Allen, Charles, second class	Feb. 16, 1891
Naval Cadet Arison, Edgar Emmett, second class	Feb. 19, 1891
Naval Cadet Logan, William Vance, third class	Feb. 19, 1891
Naval Cadet Blandy, Edwin Chauncey, fourth class	Feb. 19, 1891
Naval Cadet Kress, Frederick Charles, fourth class	Feb. 19, 1891
Naval Cadet McAvoy, Ballard Brownlee, fourth class	Feb. 19, 1891
Naval Cadet Tolfree, Herbert Myron, fourth class	Feb. 19, 1891
Naval Cadet Bannon, Philip Michael, second class	Feb. 20, 1891
Naval Cadet Hooker, James Clifton, third class	Feb. 20, 1891
Naval Cadet Bivins, Robert Francis, fourth class	Feb. 20, 1891
Naval Cadet Houk, Herman Whitelaw, fourth class	Feb. 20, 1891
Naval Cadet Towne, Arthur Elisha, fourth class	Feb. 24, 1891
Naval Cadet Wishart, William Clifton, third class	Feb. 26, 1891
Naval Cadet Valentine, William Stanley, third class	May 15, 1891
Naval Cadet Baird, Lewis Conway, third class	June 8, 1891
Naval Cadet Dennett, Stanley Pullen, second class	June 17, 1891
Naval Cadet Groesbeck, William Gerard, third class	June 17, 1891
Naval Cadet Bagley, Worth, third class	June 17, 1891
Naval Cadet Baldwin, Murray, fourth class	June 17, 1891
Naval Cadet Craven, Thomas Tingey, fourth class	June 17, 1891
Naval Cadet De Kay, Eckford Craven, fourth class	June 17, 1891
Naval Cadet Greer, George Tate, fourth class	June 17, 1891
Naval Cadet Izard, Walter Blake, fourth class	June 17, 1891
Naval Cadet McCormack, Michael James, fourth class	June 17, 1891
Naval Cadet Watson, Edward Howe, fourth class	June 17, 1891
Naval Cadet Stearns, Edward Cheever, third class	June 18, 1891
Naval Cadet Andrews, Claude Norton, fourth class	June 25, 1891
Naval Cadet Breckinridge, Joseph Cabell, second class	June 27, 1891
Naval Cadet Gibbs, Washington Dorsey, first class	Sept. 3, 1891
Naval Cadet Hoblitzelle, William Edward, second class	Oct. 3, 1891
Naval Cadet Asbury, Louis George, third class	Oct. 7, 1891
Naval Cadet Zillman, Christian Charles Herman, second class	Oct. 9, 1891
Naval Cadet Rice, Arthur, second class	Oct. 13, 1891
Naval Cadet Stopford, Frederick William, second class	Oct. 13, 1891
Naval Cadet Batts, Edward Lee, fourth class	Oct. 13, 1891

DISMISSED.

Naval Cadet Feild, Hubbard Moylan, third class	Dec. 18, 1890
Naval Cadet Dailey, Harry Logan, fourth class	Dec. 18, 1890

MERIT-ROLLS FOR 1890-'91.

Merit-rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 75, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets that take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit-roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent. of the multiple in any year shall be distinguished by a star affixed to their names on the merit-rolls." (Regulations U. S. Naval Academy, § 191.)

The diplomas of cadets whose final marks on the graduating merit-roll are not less than 85 per cent. of the maximum read "passed with distinction"; those whose final marks are between 7½ per cent. and 85 per cent. of the maximum read "passed with credit"; and those whose final marks are between 62½ per cent. and 7½ per cent. of the maximum read "passed."

P Physically disqualified for the naval service.

** Received 85 per cent. of the multiple.*

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for engineer division.

l Honorably discharged at end of four years' course.

r Resigned.

s Sick.

Merit-roll of the Naval Cadets of the Graduating Class at the conclusion of the Six Years' Course, June, 1901.

Order of Merit.	Name.	Examinations.					Aggregate for final examination.	Aggregate for four years.	Final aggregate.	Assignment.
		Naval tactics and gunnery.	Ordnance and gunnery.	Navigation.	Steam-engineering.	Modern languages.	Cruise reports, navigation, and other data.			
	Maximo.	86	44	44	44	86	86	700	1000	
1	Arthur B. Hoff	66.90	57.73	57.80	54.94	57.94	51.78	211.34	680.75	Ensign.
2	Nathan C. Twining	64.24	60.04	57.08	59.92	58.14	51.16	209.04	642.46	Ensign.
3	Benjamin F. Hitchcock	62.14	52.01	52.67	53.71	55.37	50.58	181.38	630.92	Ensign.
4	Sumner E. Kittelle	64.34	55.55	58.53	57.51	54.42	52.08	201.02	603.29	Ensign.
5	William V. Pratt	63.83	52.76	55.44	52.56	53.28	50.48	186.76	612.13	Ensign.
6	Louis M-C. Nelson	62.70	53.22	52.54	41.36	52.54	50.48	183.26	584.35	Assistant engineer.
7	Lewis C. Lucas	59.54	59.60	50.91	52.56	51.07	50.23	183.70	607.00	Second Lieutenant, Marine Corps.
8	George B. Marrell	59.62	51.08	52.78	51.02	16.46	52.50	178.08	583.73	Ensign.
9	John B. Patton	59.90	56.43	59.61	53.55	51.49	19.03	179.09	604.69	Assistant engineer.
10	Thomas P. Magruder	63.40	57.15	58.38	57.50	51.91	51.00	189.98	565.51	Ensign.
11	William D. MacDonnell	61.44	51.68	57.73	53.88	51.70	51.00	178.08	604.08	Ensign.
12	George B. Bradshaw	62.42	54.98	50.80	54.21	54.99	50.23	187.62	549.18	Ensign.
13	George W. Danforth	60.88	51.13	58.71	57.95	19.67	19.38	177.16	556.53	Assistant engineer.
14	Bretton B. Newman	62.00	58.62	57.60	50.65	50.65	19.38	188.67	566.75	Second Lieutenant, Marine Corps.
15	Charles G. Long	60.33	58.60	50.56	57.73	51.28	19.80	169.30	664.98	Second Lieutenant, Marine Corps.
16	Louis B. de Roigree	62.56	56.20	52.01	51.36	18.97	51.00	182.79	549.20	Ensign.
17	William W. Phelps	64.98	54.21	53.77	53.23	18.88	50.23	187.96	543.22	Ensign.
18	Ben H. Fuller	63.28	54.21	56.30	51.24	51.03	19.92	184.66	540.25	Second Lieutenant, Marine Corps.
19	Louis A. Kader	60.74	53.22	54.21	50.09	52.46	18.78	180.10	542.15	Ensign.
20	William C. Cole	59.90	52.89	59.92	54.67	51.14	51.30	180.08	541.69	Ensign.
21	Island H. Othay	58.50	54.76	59.15	55.86	19.25	51.13	178.44	641.87	Assistant engineer.
22	Charles A. Broad	57.80	53.00	50.96	54.67	50.96	50.96	177.34	639.76	Ensign.

23	Philip Williams.....	45.64	31.02	27.72	36.08	19.95	19.99	180.33	535.38	715.71	Ensign.
24	Robert E. Carnoy.....	43.40	31.35	29.37	38.06	22.26	20.10	184.54	529.77	714.31	Assistant engineer.
25	Warren J. Terhune.....	39.34	32.67	32.12	31.68	22.12	21.30	179.23	527.19	706.42	Ensign.
26	George G. Mitchell.....	36.54	28.93	29.15	29.37	21.63	20.10	165.72	540.57	706.29	Ensign.
27	William K. Harrison.....	42.00	34.10	28.60	32.78	21.40	20.52	179.49	510.49	689.98	Ensign.
28	Robert McG. Dutton.....	41.16	29.04	27.61	30.25	20.61	18.72	187.29	513.55	680.84	Second Lieutenant, Marine Corps.
29	Julius Prochaska.....	39.48	27.72	27.61	28.27	20.93	20.52	164.53	503.51	668.04	Second Lieutenant, Marine Corps.
30	George L. Fermier.....	37.66	28.93	27.50	34.87	19.18	21.42	169.56	492.19	661.75	Ensign.
b	Edward R. Lowndes.....	43.26	32.12	29.92	33.99	18.46	13.62	170.97	554.67	726.06	Second Lieutenant, Marine Corps.

NOTE.—Naval Cadets Richmond B. Hobson and George H. Cook, appointed Assistant Naval Constructors, did not appear at the final graduating examination.

b Deficient in cruise reports.

Merit-roll for the four years ending June, 1890, of the Naval Cadets of the Class appointed in 1886, now performing required service afloat—Line Division.

Order of merit.	NAME	Aggregate for fourth year.	Aggregate for third year.	Aggregate for second year.	Aggregate for first year.	General aggregate for four years.
	Maxima	304	238	152	76	760
01	Thomas F. Bohn	264.08	198.36	137.90	71.25	671.59
02	Lawrence Spear	270.80	192.80	132.23	68.23	664.06
3	Noah T. Coleman	249.39	186.59	131.22	65.25	632.45
4	Frank H. Schofield	264.01	184.65	125.63	64.51	638.80
5	John V. Chase	236.19	180.78	126.23	65.17	608.37
6	Alonso Cartley	248.74	177.36	117.80	58.70	602.60
7	Henry J. Kiegemeler	237.07	171.24	120.97	63.08	602.36
8	Charles Davis	234.66	173.54	124.11	64.37	596.18
9	Matt H. Signor	223.06	169.02	121.94	61.81	574.83
10	John M. Blankenship	231.39	163.57	118.09	61.73	574.78
11	William H. Buck	222.48	160.54	121.09	64.29	568.40
12	Montgomery M. Taylor	219.93	166.17	112.10	62.26	560.46
13	Henry S. Ritter	224.80	158.01	109.60	57.11	549.52
14	George W. Williams	210.68	161.95	120.18	65.17	558.98
15	Albertus W. Catlin	229.47	158.22	109.23	58.83	555.75
16	Charles B. McVay, jr.	219.68	159.95	117.38	56.28	553.29
17	Charles T. Vogelzang	210.85	158.43	117.42	62.39	549.19
18	Lay H. Everhart	222.76	155.73	112.22	57.26	548.13
19	William A. Snow	218.44	157.26	114.60	58.19	548.69
20	Franklin B. Sullivan	218.46	165.63	105.67	55.65	545.21
21	Claude Bailey	208.52	156.99	112.84	61.67	539.92
22	Wendell C. Neville	220.76	156.69	103.67	58.04	539.13
23	Lawrence H. Moses	200.81	163.28	110.69	64.27	539.05
24	John H. Dayton	216.14	152.94	107.26	58.21	534.57
25	Lucius A. Butwick	212.63	154.83	107.88	55.90	531.24
26	Charles O. Bond	207.26	161.08	107.02	55.73	529.11
27	Oyrus S. Radford	207.75	152.80	107.16	54.75	522.46
28	Thomas C. Treadwell	199.72	157.27	107.91	61.89	526.79
29	William A. Moffett	201.24	152.26	111.83	60.05	525.37
30	Julius L. Latimer	211.11	155.25	97.95	62.02	516.23
31	John B. Edie	199.06	149.28	105.41	58.49	512.24

Merit-roll for the four years ending June, 1890, of the Naval Cadets of the Class appointed in 1886, now performing required service afloat—Engineer Division.

1	Urban T. Holmes	248.20	181.08	114.52	54.83	608.73
2	Claude B. Price	234.66	168.04	109.15	54.92	566.77
3	Doctor E. Dismeken	204.19	151.63	101.79	54.60	512.00

Merit-roll, for the four years ending June, 1891, of the Naval Cadets of the Class appointed in 1887, now performing required service afloat—Line Division.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima.....	76	152	228	304	760
*1	Frank B. Zahn.....	70.11	144.82	204.95	280.69	700.57
*2	Horatio G. Gillmer.....	69.37	142.55	202.97	279.80	694.69
*3	Henry G. Smith.....	66.49	135.24	201.49	277.70	680.92
*4	Richard M. Watt.....	68.53	135.36	194.21	266.31	664.41
*5	Reginald E. Belknap.....	69.19	133.53	189.58	266.89	659.19
*6	DeWitt Blamer.....	61.72	130.05	197.28	257.44	646.49
7	Clark D. Stearns.....	64.49	129.78	186.00	251.38	631.65
18	Daniel B. Ninde.....	64.43	133.04	181.15	249.92	628.54
9	Edwin T. Pollock.....	62.72	129.62	185.14	250.33	627.81
10	Henry C. Kuensell.....	64.22	127.96	184.61	250.03	626.84
11	Arthur L. Willard.....	63.11	123.44	177.87	257.38	621.80
12	Harley H. Christy.....	61.78	126.28	186.24	242.58	616.88
13	Bonwick J. Hartung.....	57.77	119.84	175.87	247.90	601.38
14	Henry H. Hough.....	64.30	124.62	184.27	247.74	600.93
15	Noble E. Irwin.....	58.11	118.75	185.26	242.50	599.71
16	Lucien G. Smith.....	64.41	125.45	172.48	236.46	596.80
17	Waldo Evans.....	53.84	118.24	176.95	246.20	595.23
18	John G. F. Moale.....	62.68	122.23	162.87	235.21	582.98
119	Robert L. Flowers.....	53.64	114.23	168.65	234.63	571.14
20	Albert S. McLemore.....	67.69	124.18	155.15	218.21	565.23
21	Thomas J. Senn.....	55.41	107.84	161.42	237.71	562.38
22	Bion B. Bierer.....	51.67	115.04	160.41	228.19	562.31
23	Harry H. Caldwell.....	56.23	110.31	164.05	231.09	561.67
24	Charles F. Preston.....	63.66	121.47	153.13	222.72	560.98
25	Dion Williams.....	55.69	109.91	151.73	242.57	560.20
26	Rufus H. Lane.....	59.51	110.01	163.04	227.95	554.41
27	Jay H. Sypher.....	54.59	112.47	159.26	224.19	550.51
28	Richard H. Leigh.....	53.27	113.49	158.28	224.38	549.87
29	Horace G. Macfarland.....	58.21	101.69	149.35	245.04	549.29
30	William D. Brotherton.....	55.35	111.74	160.00	221.98	549.07
31	Adelbert Althouse.....	53.97	110.26	160.72	222.10	547.05
32	James F. Carter.....	57.01	110.47	152.82	224.54	544.84
33	Frank H. Kochersperger.....	53.95	107.01	159.69	217.19	537.84
34	William N. McKelvy.....	54.51	108.32	152.05	216.90	531.78
35	Harry E. Smith.....	52.00	108.16	154.68	215.72	530.56
36	Elisha Theall.....	49.29	102.37	147.19	225.49	524.44
37	Irving Blount.....	56.09	111.98	150.08	205.01	523.79
38	George Richards.....	48.56	106.31	153.25	208.12	516.14
39	Louis H. Gross.....	49.79	101.84	148.81	211.63	511.87

Merit-roll for the four years ending June, 1891, of the Naval Cadets of the Class appointed in 1887, now performing required service afloat—Engineer Division.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima	76	152	228	304	760
1	John K. Robinson	71.15	130.40	190.11	247.67	639.13
2	John H. Bowers	60.31	130.67	184.41	236.71	612.10
3	Milton E. Reed	58.73	124.10	168.58	245.46	596.87
4	Charles R. Emrich	58.63	117.65	165.61	228.90	570.79
5	William H. McGinnis	59.45	116.59	161.53	224.07	561.64
6	George H. Shepard	62.29	110.02	161.24	216.77	550.32
7	George W. Laws	66.76	108.78	151.25	212.64	539.43

Order of annual merit.	NAME.	Aggregate.										
		Boatsmanship, naval construction, and naval tactics.	Boatsmanship, practical.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice and cruise.	Least squares and applied mechanics.	Physical.	International law.	Physiology and hygiene.	Discipline.	
	Maximo.....	60	8	60	48	8	20	16	12	8	64	304
1	Frank B. Zahn.....	54.30	6.50	55.65	46.24	7.40	17.85	13.68	10.95	7.04	62.08	280.69
2	Horatio G. Gillmor.....	55.20	6.20	56.70	43.20	7.00	18.55	14.32	11.25	7.06	60.32	279.80
3	Henry G. Smith.....	54.00	5.12	55.65	44.76	7.44	19.50	13.52	10.59	6.64	60.48	277.70
4	Reginald R. Belknap.....	51.90	6.78	53.25	41.76	6.94	15.50	12.92	10.86	6.02	60.96	266.89
5	Richard M. Watt.....	50.85	5.48	52.65	43.32	7.26	17.70	12.24	10.65	6.80	59.36	266.31
6	De Witt Blumer.....	46.20	4.56	54.45	42.48	7.58	18.70	12.48	10.65	6.42	53.92	257.44
7	Arthur L. Willard.....	50.85	6.58	50.40	36.12	6.94	14.25	13.36	11.16	7.40	60.32	257.38
8	Clark D. Stearns.....	47.55	5.72	51.15	37.80	6.86	13.90	12.12	10.20	6.40	59.68	251.38
9	Edwin T. Pollock.....	46.05	5.66	49.80	41.16	7.32	14.75	11.92	10.35	5.88	57.44	250.33
10	Henry C. Kuenall.....	47.40	4.24	50.25	39.72	7.38	16.40	11.88	10.80	6.44	55.62	250.03
11	Daniel B. Munde.....	49.20	3.90	50.85	38.28	6.58	16.60	12.76	10.41	6.30	56.04	249.92
12	Benwick J. Hartung.....	48.60	6.46	49.20	35.88	6.82	13.90	11.28	10.08	5.68	60.00	247.90
13	Henry H. Hough.....	49.35	5.60	49.50	37.44	6.56	12.00	10.96	10.05	6.60	59.68	247.74
14	Waldo Evans.....	45.60	4.66	49.20	39.72	7.02	15.45	12.96	9.33	6.06	56.80	246.20
15	Horace G. Macfarland.....	47.10	5.42	50.55	36.60	6.00	14.35	11.76	10.66	6.38	56.32	245.04
16	Noble E. Irwin.....	44.85	5.92	50.10	36.24	6.90	15.85	11.04	10.29	5.94	55.36	242.59
17	Harley H. Christy.....	43.35	4.74	51.00	39.00	7.34	13.85	12.24	9.84	6.70	55.62	242.58
18	Thomas Williams.....	49.05	5.36	48.90	33.00	5.64	14.40	12.32	10.44	6.50	56.96	242.57
19	Thomas J. Senn.....	43.80	4.38	46.95	38.28	6.78	14.80	11.12	9.90	6.22	56.48	237.71
20	Lucien G. Smith.....	44.70	4.24	47.25	32.88	5.78	14.25	11.60	11.04	6.96	57.76	236.46
21	John G. F. Moale.....	45.60	5.80	44.10	34.20	6.00	12.65	11.06	10.20	5.74	59.84	235.21
22	Robert L. Flowers.....	43.95	5.06	46.20	32.40	6.62	14.15	10.66	10.29	6.14	59.96	234.63
23	Harry H. Caldwell.....	44.40	5.62	46.45	36.64	5.92	14.30	11.20	9.90	5.82	48.64	231.09

MERIT-ROLL—FIRST CLASS.

Merit-roll of the Naval Cadets of the First Class—Line Division—Annual Examination, June, 1891—Continued.

Order of annual merit.	NAME.	Dermatology, naval construction, and naval law.		Dermatology, practice (the cruise).		(Ordnance and gunnery.		Navigation and surveying.		Navigation, practice (the cruise).		Least squares and applied mechanics.		Physics.		International law.		Physiology and hygiene.		Discipline.		Aggregate.
		60	8	60	8	60	45	8	60	45	8	60	10	12	10	12	8	45	60	45		
34	Reuben H. Lane	44.70	5.08	47.40	32.76	5.12		5.12	13.40	10.12	10.71	68.16	227.65									
35	Elton B. Brier	42.46	5.60	44.10	37.44	7.04		7.04	13.75	10.44	9.39	68.45	226.19									
36	Eliska Thell.	42.75	5.14	44.25	32.52	6.20		6.20	11.40	10.76	8.97	67.60	225.40									
37	James F. Carter	41.85	5.25	45.00	33.12	6.88		6.88	12.50	10.72	9.63	68.33	224.54									
38	Richard H. Leigh	39.75	5.16	45.30	32.88	6.18		6.18	12.80	10.68	9.27	68.90	224.38									
39	Jay H. Sypher	45.81	6.80	47.10	33.72	5.74		5.74	12.00	10.84	10.53	64.94	224.19									
40	Charles F. Preston	40.95	4.44	44.10	32.52	5.68		5.68	12.90	10.00	9.45	68.94	222.73									
41	Adolbert Althaus	41.55	4.84	42.90	33.36	5.66		5.66	13.20	9.60	10.11	64.94	222.17									
42	William D. Brotherton	43.95	4.54	46.20	32.52	5.06		5.06	14.15	10.58	9.13	48.23	221.08									
43	Albert B. McLennore	40.65	4.02	43.05	30.84	5.64		5.64	12.75	10.06	9.75	64.16	218.21									
44	Frank H. Kocherberger	42.15	4.56	43.60	32.04	5.02		5.02	11.95	10.56	9.81	61.08	217.19									
45	William M. McKelvy	40.95	4.38	38.45	33.00	5.62		5.62	11.20	10.44	10.23	55.53	216.90									
46	Harry B. Smith	41.25	4.54	43.75	30.84	5.08		5.08	11.55	9.48	8.79	54.56	215.72									
47	Leola H. Green	39.00	4.08	43.50	30.60	5.66		5.66	12.50	9.23	9.67	51.26	211.63									
48	George Richards.	41.40	4.48	43.50	32.40	5.26		5.26	13.05	10.00	9.68	62.08	208.12									
49	Erving Elvest	39.15	3.86	38.45	32.40	6.74		6.74	11.40	10.00	8.97	46.76	205.01									
50	Kagaham Nire.	39.40	4.06	38.10	27.00	6.10		6.10	9.80	8.76	8.08	48.23	180.87									
51	David Van H. Allen.		1.80			6.13		6.13														

a Japanese student. Withdrawn at the end of the four years' course.

Merit-roll of the Naval Cadets of the First Class—Engineer Division—Annual Examination, June, 1891.

Order of annual merit.	NAME.	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics and chemistry.	Physiology and hygiene.	Discipline.	Aggregate.
	Maxima _____	32	48	40	32	20	40	20	8	64	304
1	John K. Robison.....	26.56	39.00	32.90	27.44	17.60	33.80	16.75	5.26	48.16	247.47
2	Milton E. Reed.....	25.04	38.04	28.70	27.60	19.15	26.30	17.45	6.38	56.80	245.46
3	John H. Bowen.....	25.28	36.12	27.60	25.44	19.55	31.60	16.20	5.64	49.28	236.71
4	Charles R. Enrich.....	23.60	33.36	26.90	24.06	18.60	26.90	13.80	5.86	52.80	226.80
5	Wm. H. McGrann.....	23.36	34.20	26.00	24.01	17.80	27.20	12.85	6.46	51.20	224.07
6	George H. Shepard.....	21.12	32.76	26.50	23.04	15.80	30.40	14.35	5.92	46.88	216.77
7	George W. Laws.....	21.68	31.08	26.30	22.00	16.10	26.80	13.80	5.62	46.96	212.54

Merit-roll of the Naval Cadets of the Second Class—48 members—Annual Examination—June, 1891.

Order of annual merit.	NAME.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Discipline.	Aggregate.
	Maxims.	12	12	22	12	48	40	12	12	48	225
1	John B. Bouret	9.09	11.40	30.72	10.80	45.84	37.70	10.92	11.46	62.20	217
2	Joseph K. McDonald	10.14	10.62	28.40	10.62	45.00	34.60	9.46	10.92	65.34	212
3	Howard W. Huntington	11.07	9.93	30.00	9.63	37.32	33.30	8.82	10.98	64.16	210
4	John H. Porter	8.52	10.41	29.92	10.17	39.12	35.40	9.39	10.68	60.92	194
5	Walter L. Ferguson	9.06	10.08	26.72	9.33	40.32	31.60	11.16	10.76	62.00	194
6	Gregory C. Davison	9.03	9.81	27.62	9.99	43.92	32.50	8.79	10.08	61.62	188
7	George C. Day	9.96	10.08	27.84	10.02	40.32	31.60	9.54	10.65	63.08	188
8	Luke McNamee	9.36	10.26	34.80	9.66	40.08	32.80	10.08	10.66	65.00	187
9	Charles L. Humay	9.24	9.93	26.72	10.89	39.48	31.60	9.81	10.74	64.04	187
10	Joseph R. Campbell	8.73	10.20	26.08	10.26	38.64	32.60	9.87	11.29	63.08	186
11	Frederick L. Sawyer	9.21	10.17	27.08	9.96	36.60	32.60	9.09	10.56	64.39	186
12	Charles T. Jewell	9.72	9.45	25.60	9.39	36.84	32.50	8.94	11.10	61.64	186
13	Holden A. Evans	9.57	10.59	25.44	10.11	37.44	30.80	9.57	9.39	68.76	185
14	John R. Y. Blakely	8.31	9.87	34.72	8.61	41.68	31.50	10.08	11.40	60.80	185
15	William C. Dawson	9.15	10.17	23.92	9.96	34.80	32.30	11.70	9.54	63.30	184
16	Leon S. Thompson	8.82	9.24	24.32	9.99	35.04	30.20	9.96	9.12	62.98	183
17	John F. Hines	8.67	9.67	24.80	9.84	34.20	27.00	8.16	10.71	65.70	182
18	Fred R. Payne	8.31	8.25	25.28	9.60	37.80	34.30	8.67	7.74	35.29	177
19	James Sheehan	8.76	8.64	22.16	9.51	33.12	27.20	9.63	10.09	60.20	177
20	John T. Myers	8.37	8.91	22.40	9.57	34.56	28.30	8.94	10.41	60.46	177
21	Frederick A. Traut	8.54	8.97	24.80	9.60	31.32	26.80	10.62	10.92	39.70	177
22	Stanford K. Morse	8.43	8.31	21.92	10.26	30.00	26.10	10.44	10.71	62.50	176
23	Robert K. Crank	8.16	8.60	22.80	9.69	31.92	27.80	9.49	9.69	39.24	176
24	Austin R. Davis	7.86	8.07	21.84	8.07	35.16	26.00	9.39	10.05	60.08	176
25	Edward R. Kellogg	8.43	7.86	22.80	10.05	30.48	25.80	7.92	9.46	62.88	175
26	Benjamin H. McCormick	8.37	8.04	20.32	9.72	30.00	25.40	10.56	10.69	62.50	175
27	Joel R. P. Pringle	8.52	9.06	20.96	9.72	31.56	26.10	10.83	8.07	60.60	175
28	George Mallison	8.43	8.34	22.16	9.37	31.44	29.20	8.79	8.89	38.70	175
29	Thomas L. Pitt	8.13	8.22	20.80	9.51	30.48	25.80	9.09	10.17	62.40	174
30	Powers Symington	8.46	8.58	21.20	8.76	30.48	27.10	10.35	9.00	60.68	174
31	Aaron L. Gamble	7.50	7.53	22.16	8.94	30.96	26.10	9.06	9.38	61.70	174
32	Walter Ball	8.37	8.55	22.24	9.42	34.44	28.10	8.04	9.08	35.04	174
33	Yates Spring, Jr.	8.40	8.67	21.68	8.79	35.88	26.10	8.31	8.34	38.00	174
34	George H. Wither	9.24	8.88	21.68	9.94	31.20	26.80	8.34	8.22	39.50	173
35	R. Del. Hasbrouck	8.22	8.4	21.96	9.84	30.12	25.70	8.58	10.66	39.58	173
36	Theodore H. Low	8.25	9.15	20.00	9.42	31.68	26.30	8.67	9.37	37.08	173
37	Charles F. Macklin	8.13	8.40	20.24	9.42	31.56	25.80	7.92	8.49	61.00	173
38	Washington D. Gibbs	8.40	8.10	21.60	8.40	27.30	26.60	8.52	7.89	34.22	173
39	Arthur Rice	7.85	8.10	22.80	9.51	28.32	25.60	9.51	11.19	63.46	172
40	Thomas R. Borden	9.43	7.62	20.32	9.45	29.60	26.30	10.17	9.04	61.70	172
41	John H. Kennell, Jr.	8.91	7.93	19.44	9.24	30.60	26.30	8.13	8.73	63.08	172
42	Frederick W. Stopford	9.91	8.22	20.00	8.88	29.40	25.80	9.30	8.31	38.12	172
43	Stanley P. Bennett	7.88	7.11	20.00	9.31	29.28	21.50	8.31	8.04	36.58	172
44	Joseph C. Breckinridge	7.74	7.17	18.72	9.79	27.24	24.10	9.57	7.93	37.69	169
45	William K. Holdstock	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
46	Emmett R. Folger	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
47	Warren Kelsey	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
48	Christian C. Gillman	.....	.....	.....	11.01	.....	.....	.....	9.61	62.08	.....

*Merit-roll of the Naval Cadets of the Third Class—56 members—Annual Examination,
June, 1891.*

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Aggregate.
		40	20	16	20	24	32	152
*1	William S. Montgomery	39.40	18.65	14.44	14.40	23.10	29.20	136.19
*2	Wilfred Van N. Powelson	38.00	16.95	14.64	17.40	22.56	29.28	138.83
*3	Edwin A. Elder	35.70	16.80	14.24	17.85	24.06	28.06	136.73
*4	Louis J. Magill	35.30	15.95	13.72	18.60	23.58	29.20	136.35
*5	Claude E. Fitch	31.90	17.90	13.20	17.80	24.12	28.64	133.56
*6	Frank H. Clark, jr.	34.50	15.25	13.40	17.10	23.64	29.36	133.25
*7	Eugene L. Bisset	33.30	17.25	14.16	18.60	21.54	28.08	130.93
*8	Daniel C. Nutting, jr.	29.30	17.50	14.56	17.60	22.26	29.12	130.34
*9	Maurice B. Peugnet	27.40	14.50	14.12	20.65	23.70	29.04	129.41
10	Charles J. Lang	32.10	15.30	13.28	17.10	24.12	26.96	128.86
11	Walter S. Croasley	32.00	15.45	13.80	16.60	21.06	29.04	127.85
12	Joseph O. Groff	33.20	14.45	13.96	17.15	20.76	28.16	127.68
13	Thomas D. Parker	31.10	15.40	14.00	19.20	19.86	27.92	127.48
14	Henry H. Ward	31.80	16.15	13.04	17.20	22.96	25.76	126.93
15	John S. Doddridge	33.90	15.95	14.00	14.80	19.80	28.00	126.45
16	Edward H. Campbell	37.80	14.15	12.12	14.60	21.48	26.08	126.23
17	Thomas S. Kellogg	31.80	13.75	13.36	16.60	21.66	28.40	125.47
18	Allen M. Cook	32.40	13.80	13.12	13.95	23.62	28.56	125.35
19	Henry B. Price	26.80	14.75	14.32	16.55	23.64	29.12	125.18
20	Joseph A. Perry	33.00	14.50	12.60	14.60	21.30	28.64	124.64
21	William K. Gise	28.40	14.25	14.08	17.55	22.32	27.68	124.28
22	Thomas S. Wilson	30.30	14.80	13.84	14.90	21.54	28.40	123.78
23	Orton P. Jackson	30.40	13.70	12.76	16.10	21.66	28.64	123.26
24	Martin E. Trench	28.80	15.80	12.92	14.30	21.78	28.32	121.92
25	John R. Brady	30.10	14.15	12.60	15.75	21.54	27.04	121.18
26	John P. J. Ryan	27.70	13.90	12.84	15.25	23.76	27.36	120.81
27	David M. Berry	26.50	14.90	12.40	14.60	23.40	28.88	120.66
28	Frank B. Upham	30.40	13.30	13.04	16.10	18.60	29.04	120.48
29	Chester Wells	28.40	16.10	13.12	15.15	20.22	27.36	120.35
30	John R. Morris	30.70	15.60	12.68	14.95	18.42	27.92	120.27
31	Peter O. Hains, jr.	27.70	13.95	11.96	14.75	22.86	28.64	119.86
32	Henry A. Pearson	27.20	14.10	13.12	14.50	20.76	29.12	118.80
33	Frank L. Chadwick	30.00	14.10	12.72	16.15	18.18	27.60	118.75
34	Richard Sturdevant	25.00	13.60	12.96	14.65	21.90	28.56	116.67
35	William G. Powell	25.80	12.75	11.32	15.85	23.88	27.04	116.64
36	Percy N. Olmsted	25.70	12.65	11.84	14.35	21.60	29.36	116.50
37	Frank De W. Road	25.30	13.50	12.32	15.90	21.30	26.96	115.28
38	Richard S. Douglas	26.20	13.05	12.60	15.45	19.68	27.28	114.26
39	John L. Sticht	27.50	13.35	12.96	14.10	19.08	27.20	114.19
40	Christopher C. Fewel	30.20	14.25	12.08	14.80	17.70	25.28	114.11
41	Alfred A. McKethan	26.00	13.20	12.12	13.60	19.86	28.40	113.18
42	Marvin Carver	25.90	13.20	12.76	13.00	21.30	26.64	112.80
43	Gerald L. Holsinger	26.20	13.50	12.76	15.05	17.94	26.96	112.41
44	John A. Crocker	26.00	13.10	11.72	13.95	20.76	26.40	111.93
45	Alfred A. Pratt	25.60	13.40	12.88	13.65	18.84	25.12	109.49

*Merit-roll of the Naval Cadets of the Third Class—56 members—Annual Examination,
June, 1891—Continued.*

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Disciplines.	Aggregate.
	Maxima.	40	30	10	30	24	28	142
46	Guy T. Scott.....	25.70	12.85	12.86	12.65	12.75	25.76	14
47	André M. Procter.....	26.10	12.60	11.44	12.35	21.66	22.64	10
48	James B. Potter.....	25.30	12.05	12.12	14.85	17.26	25.64	10
49	Edward C. Stearns.....	24.10	11.90	11.68	14.60	22.54	24.98	10
50	Walter B. Whitman.....	24.60	12.00	12.04	13.05	16.78	22.66	10
51	James S. Coleman.....	25.80	12.80	11.64	15.10	19.68	24.22	12
52	Worth Bagley.....	24.20	12.50	11.60	15.95	17.76	24.20	10
53	William G. Grossbeck.....	25.10	11.20	11.68	15.60	20.70	22.24	10
54	Lewis C. Baird.....	18.80	7.80	10.96	11.60	20.62	22.40	10
55	Lewis Benson Jones.....	"	"	11.44	"	"	27.20	10
56	Louis G. Asbury, Jr.....	"	"	"	"	"	"	10

Merit-roll of the Naval Cadets of the Fourth Class—72 members—Annual Examination, June, 1891.

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Aggregate.
	Maxima	20	20	20	16	76
*1	Thomas G. Roberts	19.50	18.25	17.80	14.76	70.31
*2	William P. Robert	19.25	17.85	17.30	15.28	69.78
*3	Daniel H. Cox	17.85	17.40	18.50	15.04	68.79
*4	John T. Tompkins	19.65	17.00	16.40	14.84	67.89
*5	Ridley McLean	18.35	17.15	16.85	14.88	67.23
*6	Raymond Stone	15.80	17.20	18.80	15.12	66.92
*7	Melville J. Shaw	15.25	17.70	19.00	14.92	66.87
*8	Irvin Van G. Gillis	19.45	15.10	16.90	14.92	66.37
*9	Walter J. Manion	16.80	16.15	18.25	14.92	66.12
*10	Alexander T. Hull	15.50	17.15	18.35	14.60	65.60
*11	Fritz L. Sanders	14.15	16.30	19.95	15.06	65.48
*12	Charles Webster	15.95	16.65	17.60	15.00	65.20
*13	David F. Sellers	15.15	16.35	18.50	15.04	65.04
*14	Freveast Babin	16.65	17.75	15.45	14.88	64.73
15	L. Burton Jones	15.25	16.45	17.85	14.72	64.37
16	Ernest L. Bennett	15.00	16.30	17.60	14.76	63.66
17	Winston Churchill	14.80	16.20	18.15	14.40	63.55
18	George W. Ryan	14.70	15.65	17.75	15.04	63.14
19	Stephen V. Graham	15.20	15.50	18.10	14.32	63.12
20	Simon P. Fullinwider	16.75	15.65	15.40	14.92	62.72
21	Ignatius T. Cooper	16.50	15.45	15.60	14.76	62.31
22	Arthur G. Kavanagh	17.25	15.50	16.20	13.22	62.27
23	John M. Hudgins	18.25	13.85	15.45	14.40	61.95
24	Alfred W. Hinds	15.65	15.10	16.45	14.40	61.50
25	Leland F. James	14.10	15.15	17.70	14.20	61.15
26	Roscoe Spear	13.95	15.95	16.65	14.52	61.07
27	Boling K. McMorris	15.25	16.20	14.95	14.66	61.06
28	Randolph Ridgely, Jr	14.40	15.05	16.70	14.88	61.03
29	John McC. Luby	14.30	14.25	17.05	14.44	60.04
30	Lawrence S. Adams	14.05	14.00	17.25	14.52	59.82
31	Robert W. McNeely	13.80	16.10	14.85	14.80	59.65
32	Hutch I. Cone	14.95	14.95	14.55	14.68	59.13
33	Robert H. Osborn	13.20	14.90	15.85	14.96	59.01
34	Frederick K. Perkins	15.25	14.95	15.85	12.76	58.91
35	Clarence England	14.25	15.85	14.55	14.20	58.85
36	Emery Winship	14.00	14.20	16.20	14.44	58.84
37	Roscoe C. Moody	12.30	14.25	16.65	14.40	58.60
38	Moulton K. Johnson	12.70	15.10	15.90	14.60	58.30
39	Roscoe C. Bulmer	12.85	15.05	14.55	14.64	58.09
40	Charles S. Bookwalter	12.20	15.35	14.65	14.40	57.60
41	William P. Scott	12.65	14.45	14.65	14.84	57.59
42	Henry T. Baker	12.60	15.00	14.50	14.40	57.50
43	Arthur T. Chester	15.25	13.85	13.30	14.88	57.28
44	William S. Whitted	14.30	14.70	13.55	14.76	57.31
45	Charles A. Lane	12.75	14.75	12.65	14.60	56.75

Merit-roll of the Naval Cadets of the Third Class—56 members—Annual Examination, June, 1891—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English, history, and the Constitution.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Aggregate.
	Maxima.....	40	30	16	20	24	22	182
46	Guy T. Scott.....	25.70	12.85	12.36	12.65	18.78	25.75	109.20
47	André M. Procter.....	26.10	12.80	11.44	12.35	21.06	22.04	109.79
48	James B. Potter.....	26.20	13.05	12.12	14.85	17.28	20.04	109.24
49	Edward C. Stearns.....	24.10	11.80	11.36	14.60	22.86	20.06	112.00
50	Walter B. Whitman.....	24.50	12.00	12.04	15.05	18.78	20.04	112.44
51	James S. Coleman.....	25.80	12.80	11.04	15.10	19.08	20.22	112.70
52	Worth Bagley.....	24.20	12.50	11.80	15.95	17.76	20.26	107.09
53	William G. Groenbeck.....	26.10	11.20	11.68	15.60	20.70	22.24	108.12
54	Lewis C. Baird.....	18.20	7.90	10.06	11.90	20.82	22.60	92.26
55	Lewis Benson Jones.....	"	"	11.44	"	"	27.20	—
56	Louis G. Asbury, Jr.....	"	"	"	"	"	"	—

Merit-roll of the Naval Cadets of the Fourth Class—72 members—Annual Examination, June, 1891.

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Aggregate.
	Maxima -----	20	20	20	16	76
*1	Thomas G. Roberts	19.50	18.25	17.80	14.76	70.31
*2	William P. Robert	19.35	17.85	17.30	15.28	69.78
*3	Daniel H. Cox	17.85	17.40	18.50	15.04	68.79
*4	John T. Tompkins	19.65	17.00	16.40	14.84	67.89
*5	Ridley McLean	18.35	17.15	16.85	14.88	67.23
*6	Raymond Stone	15.80	17.20	18.80	15.12	66.92
*7	Melville J. Shaw	15.35	17.70	19.00	14.92	66.87
*8	Irvin Van G. Gillis	19.45	15.10	16.90	14.92	66.37
*9	Walter J. Manion	16.80	16.15	18.25	14.92	66.12
*10	Alexander T. Hull	15.50	17.15	18.35	14.60	65.60
*11	Fritz L. Sanders	14.15	16.30	19.95	15.08	65.48
*12	Charles Webster	15.95	16.65	17.60	15.00	65.20
*13	David F. Sellers	15.15	16.35	18.50	15.04	65.04
*14	Prevoost Rabin	16.65	17.75	15.45	14.88	64.73
15	L. Burton Jones	15.35	16.45	17.85	14.72	64.37
16	Ernest L. Bennett	15.00	16.30	17.00	14.76	63.66
17	Winston Churchill	14.80	16.30	18.15	14.40	63.65
18	George W. Ryan	14.70	15.65	17.75	15.04	63.14
19	Stephen V. Graham	15.30	15.50	18.10	14.32	63.12
20	Simon P. Fullinwider	16.75	15.65	15.40	14.92	62.73
21	Ignatius T. Cooper	16.50	15.45	15.00	14.76	62.31
22	Arthur G. Kavanagh	17.25	15.50	16.20	13.32	62.27
23	John M. Hudgins	18.25	13.85	15.45	14.40	61.95
24	Alfred W. Hinds	15.55	15.10	16.45	14.40	61.50
25	Leland F. James	14.10	15.15	17.70	14.20	61.15
26	Roscoe Spear	13.95	15.95	16.65	14.52	61.07
27	Boling K. McMorris	15.25	16.30	14.95	14.56	61.06
28	Randolph Ridgely, jr	14.40	15.05	16.70	14.88	61.03
29	John McC. Luby	14.30	14.25	17.05	14.44	60.04
30	Lawrence S. Adams	14.05	14.00	17.25	14.52	59.82
31	Robert W. McNeely	13.80	16.10	14.85	14.80	59.65
32	Hutch I. Cone	14.95	14.95	14.55	14.68	59.13
33	Robert H. Osborn	13.30	14.90	15.35	14.96	59.01
34	Frederick K. Perkins	15.35	14.95	15.85	12.76	58.91
35	Clarence England	14.25	15.85	14.55	14.20	58.85
36	Emery Winship	14.00	14.20	16.20	14.44	58.84
37	Roscoe C. Moody	13.30	14.25	16.65	14.40	58.60
38	Moulton K. Johnson	12.70	15.10	15.90	14.60	58.30
39	Roscoe C. Bulmer	12.85	15.05	14.55	14.64	58.09
40	Charles S. Bookwalter	12.30	15.35	14.65	14.40	57.60
41	William P. Scott	13.65	14.45	14.65	14.84	57.59
42	Henry T. Baker	13.60	15.00	14.50	14.40	57.50
43	Arthur T. Chester	15.35	13.85	13.30	14.68	57.38
44	William S. Whitted	14.30	14.70	13.55	14.76	57.37
45	Charles A. Lane	12.75	14.75	13.65	14.80	56.71

Merit-roll of the Naval Cadets of the Fourth Class—72 members—Annual Examination, June, 1891—Continued.

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Disiplin.	Aggregate.
	Maxima.....	90	90	90	16	76
46	Philip B. Winn.....	14.35	13.45	13.90	15.00	56.70
47	Claude N. Andrews.....	12.65	13.40	16.50	14.12	56.67
48	George L. P. Stone.....	13.35	13.65	15.10	14.44	56.54
49	Frank Lyon.....	13.90	14.05	14.90	13.90	56.75
50	Ralph H. Chappell.....	14.35	13.85	13.40	14.60	56.20
51	Benjamin G. Crosby.....	12.80	12.75	16.25	14.40	56.20
52	Gilbert S. Galbraith.....	13.15	13.80	14.50	14.64	56.09
53	Joseph M. Reeves.....	12.85	13.75	13.85	14.64	55.29
54	Claude W. Griffith.....	13.50	13.50	13.90	14.34	55.24
55	Walter S. Turpin.....	12.80	13.55	13.85	14.48	54.68
56	Edwin H. Delany.....	13.15	14.35	13.30	13.16	53.96
57	George E. Gelm.....	12.75	13.50	13.15	14.48	53.88
58	Henry M. Walker.....	12.50	12.75	12.70	14.68	52.63
59	John B. Berryman.....	12.55	12.85	14.30	12.94	52.64
†	Carlton F. Snow.....	12.25	14.35	14.30	14.64	51.54
†	Edward H. Watson.....	11.15	14.80	14.35	14.56	51.86
†	Paul M. Le Bach.....	12.10	14.40	13.65	14.22	51.47
†	Edward L. Batte.....	12.00	13.25	13.70	14.80	51.75
†	Walter B. Inard.....	10.35	15.05	13.55	14.56	53.51
†	Thomas T. Craven.....	12.00	13.55	12.40	14.40	52.35
†	Murray Baldwin.....	11.80	15.25	13.05	12.00	52.10
†	Michael J. McCormack.....	11.85	13.45	12.35	14.48	52.13
†	George T. Greer.....	12.40	12.50	11.75	13.95	51.11
†	Echford C. De Kay.....	10.55	13.00	13.80	13.16	50.51
†	George H. Mann.....	"	"	"	14.78	---
†	James D. C. De Jarnette.....	"	"	"	13.80	---
†	Arthur B. Emery.....	"	"	"	14.84	---

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS NAVAL CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.)

III. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but, if it is not made by that time, the Secretary of the Navy shall fill the vacancy. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

IV. Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be not less than fifteen nor more than twenty years of age, and physically sound, well formed, and of robust constitution.—(*Rev. Stat.*, § 1517, and act of Congress approved March 2, 1889.)

V. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examinations shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners." (*Rev. Stat.*, § 1515.)

VI. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

VII. "Naval cadets found deficient at any examination shall not be continued at the Academy or in the service unless upon the recommendation of the Academic board."—(*Rev. Stat.*, § 1519.)

VIII. "The academic course of *naval cadets* shall be six years."—(*Rev. Stat.*, § 1520.)

IX. Candidates that may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the superintendent for examination for admission. Those that may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examinations.

No leaves of absence will be granted to cadets of the fourth class.

EXAMINATION.

X. Candidates will be examined physically by a board composed of three medical officers of the Navy. Any one of the following conditions will be sufficient to cause the rejection of a candidate, viz.:

- Feeble constitution, inherited or acquired;
- Retarded development;
- Impaired general health;
- Decided cachexia, diathesis, or predisposition to disease;
- Any disease, deformity, or result of injury that would impair efficiency; such as—
- Weak or disordered intellect;
- Cutaneous or communicable disease;
- Unnatural curvature of spine, torticollis, or other deformity;
- Inefficiency of either of the extremities or large articulations from any cause;
- Epilepsy or other convulsions within five years;
- * Impaired vision, disease of the organs of vision, imperfect color sense;
- Impaired hearing or disease of the ear;
- Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;
- Impediment of speech to such an extent as to impair efficiency in the performance of duty;
- Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
- † Hernia or undescended testis;
- Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;

Disease of the genito-urinary organs;

‡ Chronic ulcers, ingrowing nails, large bunions or other deformity of feet.

† Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

Table showing the minimum height for admission, for each year between the ages of fifteen and twenty years.

Age	15	16	17	18	19
Height (inches)	60	60½	61	61½	62½

Table showing mean height, weight, and chest-girth of lads between the ages of fifteen and twenty years.

Age.	Height (without shoes).	Weight (including clothes).	Chest-girth (including arms).
	Inches.	Pounds.	Feet.
15			
16			
17			
18			
19			
20			

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• Visual acuteness must not fall below *fifteen-twentieths* of the normal in either eye.

† Hernia, *complete or incomplete*, or undescended testis.

‡ *Loss of many teeth, or the teeth generally unsound.*

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers whether abstract or concrete, and to use with facility the tables of money, weights, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon, and the relation between the Troy and Avoirdupois pounds, and to reduce differences of time to differences of longitude and *vice versa*!

To define prime and composite numbers; to give the tests of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and to be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem that can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the use of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed; e. g.,

"They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they

Articles marked *a* will not be taken on board the practice ship.

Of the articles marked *b* cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.

Each naval cadet must on admission deposit with the pay-officer the sum of \$100 for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles, beside those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc	\$100
Deposit for books, etc	20
Total amount required	\$120

The value of clothing brought from home is to be deducted from this amount.

Each naval cadet *one month after admission* will be credited with the amount of \$100 actual expenses in traveling from his home to the Academy.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as naval cadets, and become students at the Academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz.:

One dress jacket	\$20.50	One jack knife	\$0.70
One blouse	11.50	Six sheets	3.36
Two pairs trousers	22.00	Hammock clews .....	.51
Two working suits	1.86	One pair of bathing trunks .....	.20
One overcoat	23.00	Three pairs of white thread gloves .....	.60
One rubber coat	4.00	Two black silk neckties .....	.64
One rubber hat .....	.55	Two clothes bags .....	.46
Two pairs of regulation leggins	1.40	One hammock mattress	2.85
One parade cap	2.55	aOne requisition book .....	.40
One knit cap .....	.66	aOne pass book .....	.40
One mug .....	.10	aStencil, ink, and brush .....	.45
One soap box .....	.62	aOne bottle of indelible ink .....	.18
One laundry book .....	.34	aOne wash basin and pitcher .....	.88
One pair of blankets	2.90	aOne pair of gymnasium slippers	1.10
Two pairs of high shoes	6.80	*One whisk .....	.13
One pair of overshoes .....	.53	*One coarse comb .....	.13
Eight white shirts	8.00	*One cake of soap .....	.10
Twelve linen collars	2.04	*One hair brush .....	.50
Eight pairs of cuffs	2.00	*Stationery .....	.50
*Eight pairs of socks	1.84	*Twelve white handkerchiefs	2.76
*Eight towels	2.00	*One pair of suspenders .....	.40
*Shaving outfit	1.61	*Four night shirts	2.52
*Four pairs of drawers (winter)	4.00	*One toothbrush .....	.23
bFour pairs of drawers (summer)	1.52	*Thread and needles .....	.19
*Four undershirts (winter)	4.00	*Blacking brush and blacking .....	.57
bFour undershirts (summer)	1.52	*Nail brush .....	.25
One hand glass .....	.36		
			21.01
	128.20		

When moving into cadet quarters, cadets will supply themselves with the following articles, viz.:

aTwo bedspreads	\$2.84	One mirror	\$1.21
aTwo pairs of drill gloves	1.00	aOne rug .....	.80
aOne slop jar .....	.90	aOne hair mattress	5.10
aTwo spatter-cloths .....	.66	aOne broom .....	.25
One hair pillow .....	.75	Six pillow cases	1.38
	6.15		8.74

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice ship, viz.:

Three working suits	\$2.79	One pair rubber leggins	\$0.40
Four woolen shirts	7.40	One pair of high shoes	3.40
Three white sailor hats .....	.93	One knit cap .....	.66
	11.12		4.46

Articles marked *a* will not be taken on board the practice ship.

Of the articles marked *b* cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.

Each naval cadet must on admission deposit with the pay-officer the sum of \$25, for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles beside those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc	\$179.62
Deposit for books, etc	20.00
Total amount required	199.62

The value of clothing brought from home is to be deducted from this amount.

Each naval cadet *one month after admission* will be credited with the amount of his actual expenses in traveling from his home to the Academy.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of citations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degree; inequalities; involution and evolution.	Hall and Knight's Elementary Algebra. Hall and Knight's Higher Algebra. Todhunter's Algebra.*
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenet's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRENCH: "Natural method of teaching languages."	La Parole Française, Sauveur and Van Dael. Bellows's Pocket Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate co-efficients and the binomial theorem; permutations and combinations; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations.	Hall and Knight's Higher Algebra Bowditch's Useful Tables.
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; measurement of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Chauvenet's Geometry
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of letters and telegrams. Themes.	A. H. Hill's Rhetoric. Ayres's Orthoepist.* Ayres's Verbalist.* Webster's Dictionary.*
	3	4	HISTORY: Program of colonial development in America, and the history of the United States; important points in the naval history of the United States, by notes or lectures.	Elliott's History of the United States. Mitchell's Atlas.*
<i>Modern Languages</i>	6	4	FRENCH: "Natural Method."	Berry's La Langue Française, 1 ^{re} partie Histoire d'un Commerce. Hollown's Pocket Dictionary.*
			SPANISH: (Given as an advanced course) "Natural Method"	Worman's First Spanish Book Seane's Dictionary.* Dreyssing's Cumulative Method and German Verbs Drill.
			GERMAN: (Given as an advanced course) "Natural Method"	Wenkstuch und Schenk's Deutsche Grammatik Whitney's Dictionary.*

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections; representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order.	Church's Descriptive Geometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles, trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles, construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry. Todhunter's Trigonometry. Bowditch's Useful Tables.
<i>English Studies, History, and Law.</i>	2	1	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seeley's English Lessons for English People. Abbott's How to Write Clearly. Ayres's Orthoëpist.* Ayres's Verbalist.* Webster's Dictionary.*
	2	4	LAW: The Constitution of the United States.	Andrews's Manual of the Constitution.
<i>Modern Languages.</i>	3	4	FRENCH: "Natural method." SPANISH: (Given as an advanced course.) "Natural method." GERMAN: (Given as an advanced course.) "Natural method."	Bücher's Series of French Plays. Bercy's La Langue Française, 2 ^e partie. Bellows's Dictionary.* Sauveur's Petite Grammaire. Ybarra's English-Spanish Method. Dreyspring's Cumulative Method and German Verb Drill. Wenckebach und Schramkamp's Deutsche Grammatik. Jeffcott & Tossell's German Newspaper Reading Book. Whitney's Dictionary

COURSE OF INSTRUCTION.

SECOND YEAR—THIRD CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mechanical Drawing.</i>	4	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	Tomlin's <i>Machine Construction</i> .*

SECOND TERM.

<i>Physics and Chemistry.</i>	5	4	<p>PHYSICS: An elementary course intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures.</p> <p>CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory; experiments illustrating the daily recitations, and the determination of simple salts, acids, and bases. Lectures.</p>	<p>Daniel's <i>Principles of Physics</i>. <i>Practical Physics</i>, by Stewart and Gee.</p> <p>Romson's <i>General Chemistry</i>. Romson's <i>Organic Chemistry</i>. Lecture Notes.</p>
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Course for first term continued. Warped surfaces, and surfaces of revolution; development of single-curved surfaces; intersection of surfaces; tangent lines and planes; projections of the sphere; axonometric projections; shades and shadows.	Church's <i>Descriptive Geometry</i> .
	4	4	ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of coordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree; equations of the plane, of lines in space, and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.	C. Smith's <i>Conic Sections</i> . Aldis's <i>Solid Geometry</i> .

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	2	4	<p>FRENCH: Course of the first term continued.</p> <p>SPANISH: Course of the first term continued.</p> <p>GERMAN: Course of the first term continued.</p>	Same as for the first term.
<i>Mechanical Drawing.</i>	2½	4	<p>MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, and gearing; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.</p>	Tomkin's Machine Construction.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	1	4	SEAMANSHIP: Description and uses of sails, their fittings and appliances; handling sails, port drills and evolutions; management under sail; duties of officers and crew.	Luce's <i>Seamanship</i> .
<i>Naval Engineering.</i>	3	4	PRINCIPLES OF MECHANISM: Marine engines and boilers. Properties of heat and its application to water; combustion; laws and properties of steam; types of marine boilers; comparative efficiency; names and uses of their attachments; hydrometers; scale and its prevention; types of marine engines, including condensers and pumps, with explanation of the use of all the parts; screw propellers and paddle wheels; the indicator and its diagrams; power of the engine and computations relating thereto; casualties; care and management of steam machinery.	Goodeve's <i>Elements of Mechanism</i> . Sennett's <i>Marine Steam Engine</i> .
<i>Mechanics and Applied Mathematics.</i>	6	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's <i>Differential Calculus</i> .
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves; centres of gravity; moments of inertia; planimeters; rules for the approximate determination of areas and volumes; differential equations.	Johnson's <i>Integral Calculus</i> . Johnson's <i>Differential Equations</i> .
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations on simple harmonic motion; wave motions, sound, light, and heat. Practical work in the physical laboratory, experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses; length of light waves. Photography. CHEMISTRY: Short course in chemical analysis.	Daniel's <i>Principles of Physics</i> . Ganot's <i>Physics</i> . Stewart's <i>Treatise on Heat</i> . Practical <i>Physics</i> , by Stewart and Geo. Kohlrausch's <i>Physical Measurements</i> . Lecture Notes.

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Professional French Reader. Bellows's Pocket Dictionary.* Sauveur's Petite Grammaire.* Langage Marin, Anglais-Français.
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings; perspective.	Tomkin's Machine Construction.*

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	1	4	Course of the first term continued.	Same as for the first term.
<i>Astronomy, Navigation, and Surveying.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular coördinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	Young's General Astronomy. Bowditch's Navigator. American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	3	4	Course of the first term continued.	Same as for the first term.
<i>Mechanics and Applied Mathematics.</i>	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Bowser's Analytical Mechanics. Bowser's Hydromechanics.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	4	4	<p>PHYSICS: Recitations in light and heat concluded.</p> <p>Electricity and magnetism commenced.</p> <p>Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the co-efficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skilful use of instruments of precision. Photography. General experiments illustrating the phenomena of static and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.</p>	<p>Name as for the first term.</p> <p>Thompson's Electricity and Magnetism.</p> <p>Ayrton's Practical Electricity.</p> <p>Day's Exercises in Electrical Measurements.*</p> <p>Lecture Notes.</p>
<i>Modern Languages.</i>	1	1½	<p>FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.</p>	<p>Name as for the first term and French newspapers.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	3	4	<p>SEAMANSHIP: Uses of compass, lead, log, and sounding machines; principles of marine-spike seamanship, including cutting, fitting, and reeving rigging; description and uses of sails, their fittings and appliances; stowage and organization; management of boats; handling sails; management under sail and under steam; turning and maneuvering, wharfing, docking, towing, piloting, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; control of behavior among waves, and performance in general.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship, section, and squadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.</p>	<p>Luce's <i>Seamanship</i>.</p> <p>Special Notes and Drawings.</p> <p>Navy Department Pamphlets.</p> <p>White's <i>Manual of Naval Architecture</i>.</p> <p>Thearle's <i>Naval Architecture</i>.</p> <p>Thearle's <i>Theoretical Naval Architecture</i>.</p> <p>Weich's <i>Text-book of Naval Architecture</i>.</p> <p>Navy and International Signal Books.</p> <p>Fleet Drill Book (Navy Department).</p>
<i>Ordnance and Gunnery.</i>	3	4	<p>ORDNANCE INSTRUCTIONS: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat howitzers and machine guns afloat and on shore; landing of seamen and marines.</p>	<p>Ordnance Instructions.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>Gunnery Drill Book for the New Armaments. (Bureau of Ordnance publication.)</p> <p>Instructions for Infantry and Artillery, United States Navy.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Ordnance and Gunnery—Continued.			<p>INFANTRY TACTIC: School of the soldier; school of the company; school of the battalion; instruction for skirmishers.</p> <p>GUNNERY: The motion of projectiles in a non-resisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them; the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Instructions for Infantry and Artillery, United States Navy.</p> <p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>Exterior Ballistics (Naval Academy publication).</p> <p>Ordnance Notes (Office).</p> <p>Naval Intelligence.</p>
Astronomy, Navigation, and Surveying.	4	4	<p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p> <p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes that take place upon a change of geographical position, the graphic representations of the amount and direction of the forces that act on the needle, and the mechanical correction of the deviation and heeling error.</p>	<p>Charveton's Spher. & P. Practical Astronomy.*</p> <p>Walker's Navigation.</p> <p>Bowditch's Navigator.</p> <p>American Ephemeris & Nautical Almanac.</p> <p>Admiralty Manual for the Deviations of the Compass.</p>
Mechanics and Applied Mathematics.	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS: Elasticity; stress and strain; theory of structures, strength and deflection of beams; beams of uniform resistance.	Cottrell and Shedd's Lectures on Applied Mechanics.
				Cottrell's Applied Mathematics.*

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric light wires; experiments upon induction; practice in photography and micro photography.	Same as for the second class year. Lecture Notes.

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	4	4	Course of the first term continued.	Same as for the first term.
<i>Ordnance and Gunnery.</i>	5	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors that arise in practice at sea; the penetration and effect of projectiles.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas of Noble and Abel connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication).</p> <p>The Elastic Strength of Guns (Naval Academy publication).</p> <p>Interior Ballistics (Naval Academy publication).</p> <p>Accuracy and Probability of Fire (Naval Academy publication).</p> <p>Nomenclature of steel B. L. R. guns and carriages, and mounts for Hotchkiss guns. (Bureau of Ordnance.)</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS: Course of the first term continued.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of base; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projections; running surveys; PRACTICAL NAVIGATION.</p>	<p>Admiralty Manual for the Deviations of the Compass.</p> <p>Chauvenet's Spherical and practical Astronomy.</p> <p>Peirce's Practical Marine Surveying.</p> <p>Projection Tables.</p>
<i>English Studies, History, and Law.</i>	2	4	<p>INTERNATIONAL LAW: The objects, sources, and sanctions of international law; the laws of war, embargo, reprisal, and retaliation; blockade; contraband of war; right of search; ship's papers and nationality; prizes; privateering; piracy; the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters; licenses to trade; recaptures.</p>	<p>Glaser's Marine International Law.</p>
	2	4	<p>SPECIAL INSTRUCTION: General description of the human body and its functions, the arrest of hemorrhage, resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction, Fridays, 7.30 to 9.30 p. m., additional.)</p>	<p>Martin's The Human Body and the Effects of Narcotics.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	2	4	<p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and in the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities.</p>	<p>White's Manual of Naval Architecture. Thearle's Naval Architecture. Thearle's Theoretical Naval Architecture. Welch's Text-book of Naval Architecture. Special Notes and Drawings.</p>
<i>Steam Engineering.</i>	3	4	<p>MARINE ENGINES: General description of modern marine engines and their dependence; expansion of steam; piston speed and size of cylinders; uses and construction of parts of a marine engine; calculations on twisting and bending moments; principles and construction of condensers and pumps; types of valves and valve gear, and valve diagrams; principles and construction of various types of propellers; the indicator and its diagrams; power of an engine and calculations relating thereto; lectures on the metallurgy of iron and steel; the production of bronzes and alloys with reference to their use in marine engineering.</p> <p>Objects of test trials; boiler trials and their results; friction of the engine, and the dynamometer; standard methods and examples of engine trials.</p>	<p>Seaton's Marine Engineering.</p>
	2	4	<p>BOILERS: Various types and efficiency of steam boilers; construction of boilers in detail, and materials used; details of fittings and attachments; causes of decay; care and preservation of boilers; fuels, solid and liquid; combustion of, with the methods of their application under natural and forced draught, their comparative qualities and properties, with instructions as to their selection for, and care of, as steam fuels; practical tests of the calorific value of fuels.</p>	<p>Thurston's Engine and Boiler Trials. Wilson's Steam Boilers. Shock's Steam Boilers.*</p>

PROGRAMME OF RECITATIONS.

FIRST TERM.

Department	Fourth class	Third class	Second class	First class, line division	First class, engineer division
Astronomy, Navigation, and Surveying				M. D. W. F. R. (1)	
English Studies, History, and Law	M. T. W. Th. F. (2)	M. F. R. (1), T. (1)			
Mathematics	M. T. W. Th. F. R. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. W. Th. F. (3)	T. (3), R. (1)		
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)	M. W. F. (2)	M. W. F. (2)
Modern Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	M. (2), F. (2) to 9.30 p.m.	T. Th. (2), F. (2)	
Physics and Chemistry			T. W. Th. F. (2)	M. T. Th. (1)	M. T. Th. (1)
Navigation, Naval Construction, and Naval Tactics			M. (1)	T. W. Th. (3)	T. W. (3)
Steam Engineering			W. Th. F. (1)		(W. F. R. (1), T. Th. (2), M. Th. F. (1))

SECOND TERM.

Astronomy, Navigation, and Surveying			W. F. (1)	M. T. Th. F. (1)	
English Studies, History, and Law	M. T. W. Th. F. (3)			W. (1), F. (2)	
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. (1), T. F. (2), R. (1)†			
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)		T. Th. F. (2)
Modern Languages	M. T. W. Th. F. (2), R. (1)†	W. Th. (2)	R. (1)†, F. (2) to 9.30 p.m.	M. T. W. Th. (2), F. (1)	
Physics and Chemistry			(M. (2), T. W. Th. F. (1), F. (2) to 9.30 p.m.)	M. T. Th. F. (2)	
Navigation, Naval Construction, and Naval Tactics			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Steam Engineering			M. T. Th. (1)		(M. T. W. Th. F. (1), M. W. (2), T. F. (2))
Special Instruction in Physical and Hygiene					M. (1), F. (2) to 9.30 p.m. & 1 (F. 7.30 to 9.30 p.m.)

† To be taken and given in alternate years. ‡ Saturday period commencing on 10th January 1911. M. to 6.15

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics.....					1	1	3	4	2	3
Ordnance and Gunnery.....							3	5		
Astronomy, Navigation, and Surveying.....						2	4	4		
Steam Engineering.....					3	3			8	9
Mechanics and Applied Mathematics.....					5	5	3		3	3
Physics and Chemistry.....				5 F	4	4	3		3	
Mathematics.....	6	5	5	5						
English Studies, History, and Law.....	5	5	4					2		
Modern Languages.....	5	5½	3	2	1 F	½ F				
Mechanical Drawing.....			4	3½	2					

SPECIAL INSTRUCTION.

The effects of alcohol, tobacco, and other narcotics.....		½ F		½ F
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F Friday 7:30 to 9:20 a. m.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Departments.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Astronomy, Navigation, and Surveying				M. (3), W. F. S. (1)	
English studies, History, and Law	M. T. W. Th. F. (2)	M. F. S. (1), T. (1),			
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. W. Th. F. (2)	T. (3), S. (1)		
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)	M. W. F. (2)	M. W. F. (2)
Modern Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	M. (2), F. (7, 20 to 9.30 p.m.) ^a	T. Th. (2), F. (3)	
Ordnance and Gunnery			T. W. Th. F. (2)	M. T. Th. (1)	M. T. Th. (1)
Physics and Chemistry					
Seamanship, Naval Construction, and Naval Tactics			M. (3)	T. W. Th. (3)	T. W. (3)
Steam Engineering			W. Th. F. (1)		(W. F. S. (1), T. Th. (2), M. Th. F. (3))

SECOND TERM.

Astronomy, Navigation, and Surveying			W. F. (2)		M. T. Th. F. (1)
English studies, History, and Law	M. T. W. Th. F. (3)			W. (1), F. (2)	
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
Mechanical Drawing		M. (1), T. F. (3), S. (1)†			
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)		T. Th. F. (2)
Modern Languages	M. T. W. Th. F. (2), S. (1)†	W. Th. (3)	S. (1), F. (7.30 to 9.30 p.m.) ^a	M. T. W. Th. (2), F. (3)	
Ordnance and Gunnery					
Physics and Chemistry		M. (3), T. W. Th. F. (1), F. (7.30 to 9.30 p.m.) ^a	M. T. Th. F. (2)		
Seamanship, Naval Construction, and Naval Tactics			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Steam Engineering			M. T. Th. (3)		(M. T. W. Th. F. (1), M. W. Th. F. (2), T. F. (3))
Special Instruction (Physiology and Hygiene)					S. (1)† F. (7.30 to 9.30 p.m.) ^a S. (1)† F. (7.30 to 9.30 p.m.) ^a

^a Lectures and practical instruction.[†] Saturday period, second term, from January 1 to March 10.

TABLE OF CO-EFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
Discipline.....	4	8	12	16	16	160	160		
<i>Seamanship, Naval Construction, and Naval Tactics.</i>									
Seamanship, Ship Building, and Naval Tactics.....			3	13	8		44	56	32
Cruise Reports, Navigation Note Books, Journals, and Station Bills.....								24	36
Practice Cruise.....				2		72			
<i>Ordnance and Gunnery.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery.....				15		60		44	
Ordnance and Gunnery.....									
<i>Astronomy, Navigation, and Surveying.</i>									
Astronomy, Navigation, and Surveying.....			3	12			12	44	
Practice Cruise.....				2		68			
<i>Steam Engineering.</i>									
Steam Machinery, Marine Engines, and Boilers.....			8					20	
Summer Practical Work.....			3		5	44			
Marine Engines.....					10				88
Designing Machinery.....					12				
Boilers.....					8		184		56
<i>Mechanics and Applied Mathematics.</i>									
Differential and Integral Calculus, and Mechanics.....			12						
Least Squares and Strength of Materials.....				5	5	68			
Mechanics.....					5		88		
<i>Physics and Chemistry</i>									
Chemistry and Physics.....		5							
Physics.....			10	5	5	80	80		
<i>Mathematics.</i>									
Algebra and Geometry.....	5								
Trigonometry, Analytical Geometry, and Descriptive Geometry.....		10				60	60		
<i>English Studies, History, and Law.</i>									
English and History.....	5								
English and Law.....		4					86		
International Law.....				4		52		24	
<i>Modern Languages.</i>									
French, Spanish, and German.....	5	5	8			52	62	28	28
<i>Mechanical Drawing.</i>									
Mechanical Drawing.....		6	3			36	36		
<i>Miscellaneous.</i>									
Special Instruction (Physiology and Hygiene).....				2	2	8	8		
Maxima for each class.....	76	162	228	304	304	700	760	240	240

* In making up the standing for a year the second term is given double the weight of the first term.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting bemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sail making; making up, bending, unbending and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

Setting up drill; school of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, monitor guns, boat howitzers, and machine guns; target practice with small-arms; target practice afloat with machine guns, rifled howitzers, Hotchkiss rapid-fire guns, and great guns; small-sword exercise; broad-sword exercise; bayonet exercise; cane exercise; handling and firing torpedoes; handling and preparing fuzes for use; determination of the strength and elasticity of gun-metal with testing machine; determination of muzzle velocities with the Schultz chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the draft; the preparation and inspection of ordnance material.

Two gold medals are awarded annually for marksmanship; one to the cadet of the first class who excels in great-gun practice, and one to the cadet of the second class who excels in practice with the service rifle and revolver.

In June, 1891, the great-gun medal was awarded to Cadet Richard M. Watt, of Pennsylvania. The practice was from the steamer *Standish*, at ranges varying from 1,100 yards to 1,500 yards, with the Hotchkiss 3-pounder and 6-pounder rapid-fire guns. The best scores were:

	Score.	Percent of Possibles.
*Cadet Watt	120	1.20
Cadet Lane	120	1.20

*Cadet Watt won in shooting off the tie by a score of 40 to 42 made by Cadet Lane out of a possible 60.

The scoring was on the service vertical target.

In December, 1891, the small-arms medal was awarded to Cadet Upham, of Montana. The targets used were the Army A and B for the Hotchkiss rifle, and a rectangle 18 by 24 inches for the revolver. The score was as follows:

	Distance.	Percent of Possibles.
On shore, A target	170	1.70
From boat, B target	200	2.00
Revolver, 18 by 24 inch target	20	2.00

PRACTICAL INSTRUCTION OF CADETS.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Navigation: Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth.

Surveying: Surveying, and constructing a chart of, a portion of the Severn River.

Compass Deviations: Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact co-efficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling co-efficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a Navy compensating binnacle.

STEAM ENGINEERING.

Vise-bench work; forging; boiler making; pattern-making; machine-tool work; taking apart and putting together engines; running engines of launches, vessels, and monitors.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week the number of each exercise is indicated by a figure in parenthesis.

FIRST CLASS.

Academic months.	Week.	First division.	Second division.	Third division.	Fourth division.
October	1	Company (4).	Company (4).	Target great guns (4).	Steam tactics (4).
	2	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battery (4).	Battery (4).	Steam tactics (4).	Target great guns (4).
	4	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
November	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target great guns (4).	Steam tactics (4).	Company (4).	Company (4).
	3	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
December	1	Steam tactics (4).	Target great guns (4).	Battery (4).	Battery (4).
	2	Monitor (1).	Monitor (1).	Monitor (1).	Monitor (1).
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
January	1	Broadword.	Steam.	Broadword.	Steam.
	2	Steam.	Broadword.	Steam.	Broadword.
	3	Broadword.	Steam.	Broadword.	Steam.
	4	Steam.	Broadword.	Steam.	Broadword.
February	1	Small sword.	Steam.	Practical ordnance.	Steam.
	2	Steam.	Small sword.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Small sword.	Steam.
	4	Steam.	Practical ordnance.	Small sword.	Steam.

SEMI-ANNUAL EXAMINATION.

February	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadword.	Steam.	Seamanship.	Steam.
	3	Steam.	Broadword.	Steam.	Seamanship.
	4	Seamanship.	Steam.	Broadword.	Steam.
March	1	Steam.	Seamanship.	Steam.	Broadword.
	2	Deviation compass (4).	Deviation compass (4).	Deviation compass (4).	Deviation compass (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Torpedoes (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target great guns (4).	Torpedoes (4).	Steam tactics (4).
May	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Steam tactics (4).	Torpedoes (4).	Target great guns (4).	Skirmish (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Torpedoes (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
June	1	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	2	Battalion infantry (4).	Battalion infantry (4).	Battalion artillery (4).	Battalion infantry (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
July	1	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	2	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).	Steam tactics (3).
	3	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
August	1	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	2	General quarters.	General quarters.	General quarters.	General quarters.
	3	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.

ANNUAL EXAMINATION.

June 1 to 10

June 10 to 15
August 20

Practice cruise

* During the months of December, January, and February, two (2) Saturday drill periods are devoted to Battalion infantry, in place of the scheduled detail drills.

SECOND CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
October	1	Company.	Company.	Target machine guns.	Steam launches.
	2	Battery.	Battery.	Steam launches.	Target machine guns.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Target machine guns.	Steam launches.	Company.	Company.
November	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Steam launches.	Target machine guns.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
December*	1	Small sword.	Steam.	Navy signals.	Steam.
	2	Steam.	Small sword.	Steam.	Navy signals.
	3	Navy signals.	Steam.	Small sword.	Steam.
	4				
January*	1	Steam.	Navy signals.	Steam.	Small sword.
	2	Broadsword.	Steam.	Signals.	Steam.
	3	Steam.	Broadsword.	Steam.	Signals.
	4	Signals.	Steam.	Broadsword.	Steam.
	5	SEMI-ANNUAL EXAMINATION.			
February*	1	Steam.	Signals.	Steam.	Broadsword.
	2	Small sword.	Steam.	Practical ordnance.	Steam.
	3	Steam.	Small sword.	Steam.	Practical ordnance.
	4	Practical ordnance.	Steam.	Small sword.	Steam.
March	1	Steam.	Practical ordnance.	Steam.	Small sword.
	2	Broadsword (4).	Broadsword (4).	Broadsword (4).	Broadsword (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Target great guns (4).	Skirmish (4).	Steam tactics (4).	Small sword (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Target great guns (4).	Small sword (4).	Steam tactics (4).
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	7	Steam tactics (4).	Small sword (4).	Target great guns (4).	Skirmish (4).
	8	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
May	1	Small sword (4).	Steam tactics (4).	Skirmish (4).	Target great guns (4).
	2	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	3	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	5	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
	6	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	7	Seamanship (3).	Seamanship (3).	Seamanship (3).	Seamanship (3).
	8	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	9	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	10	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	11	General quarters.	General quarters.	General quarters.	General quarters.
	12	Small sword.	Small sword.	Small sword.	Small sword.
	13	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10		ANNUAL EXAMINATION.			

*During the months of December, January, and February, two (2) Saturday drill periods are devoted to battalion infantry, in place of the scheduled detail drills.

SECOND CLASS.

Summer months.	Week.	First division.	Second division.	Third division.	Fourth division.
	1	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.	Machine shop a. m. Signals p. m.	Machine shop a. m. Target howitzers; p. m.
	2	Machine shop a. m. Target howitzers p. m.	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.	Machine shop a. m. Signals p. m.
	3	Machine shop a. m. Signals p. m.	Machine shop a. m. Target howitzers p. m.	Machine shop a. m. Target machine guns p. m.	Machine shop a. m. Howitzers afloat p. m.
	4	Running steam cutters a. m. Howitzers afloat p. m.	Running steam cutters a. m. Signals p. m.	Running steam cutters a. m. Target howitzers p. m.	Running steam cutters a. m. Target machine guns p. m.
	5	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.
	6	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.
	7	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.
	8	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.	Machine shop a. m. Target small arms p. m.
	9	Machine shop a. m. Target small arms p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Steam tactics p. m.	Machine shop a. m. Target great guns p. m.
	10	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.	Machine shop a. m. Boats p. m.

THIRD CLASS.

Academic Months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
October	1	Company.	Company.	Boats.	Boats.
	2	Battery.	Battery.	Boats.	Boats.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Company.	Company.
November	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Boats.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
December	1	Small sword.	Seamanship.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Small sword.	Seamanship.	Broadside guns.
	3	Broadside guns.	Rigging loft.	Small sword.	Seamanship.
January *	4				
	1	Seamanship.	Broadside guns.	Rigging loft.	Small sword.
	2	Small sword.	Target small arms.	Pivot guns.	Rigging loft.
	3	Rigging loft.	Small sword.	Target small arms.	Pivot guns.
	4	Pivot guns.	Rigging loft.	Small sword.	Target small arms.
SEMI-ANNUAL EXAMINATION.					
February *	1	Target small arms.	Pivot guns.	Rigging loft.	Small sword.
	2	Small sword.	Target pistol.	Army signals.	Rigging loft.
	3	Rigging loft.	Small sword.	Target pistol.	Army signals.
	4	Army signals.	Rigging loft.	Small sword.	Target pistol.
March	1	Target pistol.	Army signals.	Rigging loft.	Small sword.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	General quarters.	General quarters.	General quarters.	General quarters.
April	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Target small arms (4).	Skirmish (4).	Seamanship (4).	Boats (4).
	3	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	4	Skirmish (4).	Target small arms (4).	Boats (4).	Seamanship (1).
May	1	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	2	Boats (4).	Seamanship (4).	Target small arms (4).	Skirmish (4).
	3	General quarters (1).	General quarters (1).	Seamanship (1).	Seamanship (1).
	4	Battalion infantry (4).	Battalion infantry (4).	Skirmish (4).	Target small arms (4).
	5	Seamanship (1).	Seamanship (1).	General quarters (1).	General quarters (1).
	6	Battalion artillery (3).	Battalion artillery (3).	Battalion infantry (4).	Battalion infantry (4).
	7	Seamanship (3).	Seamanship (3).	Seamanship (1.).	Seamanship (1.).
	8	Small sword (3).	Small sword (3).	Battalion artillery (3).	Battalion artillery (3).
	9	General quarters (3).	General quarters (3).	Seamanship (3).	Seamanship (3).
	10	Battalion infantry.	Battalion infantry.	Small sword (3).	Small sword (3).
	11	Battalion artillery.	Battalion artillery.	General quarters (3).	General quarters (3).
	12	General quarters.	General quarters.	Boats.	Boats.
	13	Boats.	Boats.	Battalion infantry.	Battalion infantry.
	14	Battalion infantry.	Seamanship.	Battalion artillery.	Battalion artillery.
	15	Seamanship.		General quarters.	General quarters.
	16			Boats.	Boats.
	17			Battalion infantry.	Battalion infantry.
	18			Seamanship.	Seamanship.
	19				
	20				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				
ANNUAL EXAMINATION.					
June 1 to 10					
June 10 to August 28.		Practice cruise.			

*During the months of December, January, and February, two (2) Saturday drill periods are devoted to battalion infantry in place of the schedule detail drills.

FOURTH CLASS.

Academic Month.	Week.	First division.	Second division.	Third division.	Fourth division.
October....	1	Company.	Company.	Boats.	Boats.
	2	Battery.	Battery.	Boats.	Boats.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Company.	Company.
November	1	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	2	Boats.	Boats.	Battery.	Battery.
	3	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
December*	1	Dancing.	Gymnastics.	Broadside guns.	Rigging loft.
	2	Rigging loft.	Dancing.	Gymnastics.	Broadside guns.
	3	Pivot guns.	Rigging loft.	Dancing.	Gymnastics.
	4				
January*	1	Gymnastics.	Pivot guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Pivot guns.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Pivot guns.
	4	Broadside guns.	Rigging loft.	Dancing.	Gymnastics.
5					
SEMI-ANNUAL EXAMINATION.					
February*	1	Gymnastics.	Broadside guns.	Rigging loft.	Dancing.
	2	Dancing.	Gymnastics.	Dancing.	Rigging loft.
	3	Rigging loft.	Dancing.	Gymnastics.	Dancing.
	4	Dancing.	Rigging loft.	Dancing.	Gymnastics.
March	1	Gymnastics.	Dancing.	Rigging loft.	Dancing.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Seamanship.	Seamanship.	Seamanship.	Seamanship.
April	1	General quarters.	General quarters.	General quarters.	General quarters.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Gymnastics (4).	Skirmish (4).	Seamanship (4).	Boats (4).
	4	General quarters (1).	General quarters (1).	General quarters (1).	General quarters (1).
	5	Skirmish (4).	Gymnastics (4).	Boats (4).	Seamanship.
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Skirmish (4).
May	1	Boats (4).	Seamanship (1).	Gymnastics (4).	Seamanship (1).
	2	General quarters (1).	Seamanship (1).	Seamanship (1).	General quarters (1).
	3	Battalion infantry (4).	General quarters (1).	General quarters (1).	Battalion infantry (4).
	4	Seamanship (1).	Seamanship (1).	Battalion infantry (4).	Seamanship (1).
	5	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).	Battalion artillery (3).
	6	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	7	General quarters (3).	General quarters (3).	General quarters (3).	General quarters (3).
	8	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	9	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	10	General quarters.	General quarters.	General quarters.	General quarters.
	11	Boats.	Boats.	Boats.	Boats.
	12	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	13	Seamanship.	Seamanship.	Seamanship.	Seamanship.
June 1 to 10.	ANNUAL EXAMINATION.				
June 10 to August 20.	Practice cruise.				
Sept.	1	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	2	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	3	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	4	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	5	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	6	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	7	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	8	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	9	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	10	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	11	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	12	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	13	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	14	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	15	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	16	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	17	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	18	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	19	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	20	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	21	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	22	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	23	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	24	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	25	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	26	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	27	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	28	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	29	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	30	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†
	31	School of soldier.†	School of soldier.†	School of soldier.†	School of soldier.†

* During the months of December, January, and February, two (2) Saturday drill periods are devoted to Battalion Infantry in place of the scheduled drill drills.

† Swimming daily.

SUMMARY OF PRACTICAL INSTRUCTION.

Kind of instruction.	During the academic year.				Total number of instructions during academic year.	During summer months.				During month of September, fourth class.	Total number of instructions, exclusive of practice cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
Seamanship, including stripping and rigging <i>Enterprise</i>	33	30	37	35	135	(*)		(*)	(*)		135
Bigging loft.....			15	15	30						30
Boats under oar, or sail.....			15	15	30	(*)	15	(*)	(*)		45
Naval tactics with steam launches.....	13	4			16	(*)	6				21
Navy signals, day.....		5			5	(*)	3				8
Navy signals, night.....						(*)	3				3
Army signals, day.....		5	5		10		2				12
Army signals, night.....							2				2
Monitor, with great gun practice.....	4				4						4
General quarters.....	7	7	7	7	28	(*)		(*)	(*)		28
General quarters, with target practice.....	4	4	4	4	16	(*)		(*)	(*)		16
Target practice, great gun.....	8	4			12		5				17
Pivot guns.....			5	5	10						10
Broadside guns.....			5	5	10	(*)		(*)	(*)		10
Torpedoes.....	4				4						4
Practical ordnance.....	5	5			10						10
Howitzers afloat.....							5				5
Target practice, howitzers.....							5				5
School of section.....											
School of battery.....	4	5	5	5	19					10	19
School of battalion artillery.....	9	9	9	9	36						36
Target practice, machine gun.....		5			5		5				10
Target practice, small-arms.....			9		9		5				14
Target practice, pistols.....			5		5						5
School of the soldier.....											
School of the company.....	4	5	9	9	27					24	27

* Practice cruise.

SUMMARY OF PRACTICAL INSTRUCTION—Continued.

Kind of instruction.	During the academic year.				Total number of instructions during academic year.	During summer months.				During month of September.	Total number of instructions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
School of the battalion, infantry	11	11	11	11	44						44
Swamp drill	4	4	4	4	16						16
Brigade drill	15	9			24						24
Small boat	5	15	14		34						34
Practical instruction in deviation of compass	4				4						4
Practical instruction, navigation	† 14										† 14
Practical instruction, surveying	† 10										† 10
Machine shop and running ship engines	30 and † 13	20			50		54				114 and † 13
Running steam launches		5			5		6				11
Practical instruction in chemistry			† 13								† 13
Gymnastics and boxing				10	19						19
Swimming										24	24
Rowing				20	20						20

* Practice cruises.

† Study periods.

The instructions in seamanship and gunnery on board of the *Albatross*, *Porpoise*, and *Swallow* are also made instructions in running and managing the engines and boilers of those vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FIFTIETH ACADEMIC YEAR.

1894-'95.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1894.

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Uphur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, U. S. Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school, and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities for training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was removed back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1869, this official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1869.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanism, chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two cadet engineers who had entered the Academy in 1867. After an interval of four years, in October, 1871, a new class of cadet engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress, approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress, approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and Engineer Corps of the Navy and of the Marine Corps: And provided further, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year; such appointments to be made from the graduates of the year, at the conclusion of their six years' course, in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a surplus of graduates, those who do not receive such appointment shall be given a certificate of

graduation, an honorable discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress, approved March 2, 1889, provides that "the academic board of the naval academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the naval academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available."

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years."

SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

Assumed command:

Sept. 3, 1845.—Commander Franklin Buchanan.
Mar. 15, 1847.—Commander George P. Uphur.
July 1, 1850.—Commander Cornelius K. Stribling.
Nov. 1, 1853.—Commander Louis M. Goldsborough.
Sept. 15, 1857.—Captain George S. Blake.
Sept. 9, 1865.—Rear-Admiral David D. Porter.
Dec. 1, 1869.—Commodore John L. Worden.
Sept. 22, 1874.—Rear-Admiral C. R. P. Rodgers.
July 1, 1878.—Commodore Foxhall A. Parker.
Aug. 2, 1879.—Rear-Admiral George B. Balch.
June 13, 1881.—Rear-Admiral C. R. P. Rodgers.
Nov. 14, 1881.—Captain F. M. Ramsay.
Sept. 9, 1886.—Commander W. T. Sampson.
June 30, 1890.—Captain R. L. Phythian.

BOARD OF VISITORS, JUNE, 1894.

Gen. SCOTT SHIPP, Lexington, Va., *President.*

Hon. CHARLES S. RANDALL, U. S. House of Representatives, *Vice-President.*

Hon. J. R. MCPHERSON	U. S. Senate.
Hon. GEORGE C. PERKINS	U. S. Senate.
Hon. ADOLPH MEYER	House of Representatives.
Hon. JOSEPH H. OUTHWAITE	House of Representatives.
Mr. S. P. LANGLEY	Washington, D. C.
Mr. CHARLES H. WILLCOX	Atlanta, Ga.
The Venerable C. J. BRADY	Archdeacon of Kansas.
Mr. JOHN C. PEGRAM	Providence, R. I.
Gen. LEW. WALLACE	Crawfordsville, Ind.
Mr. JOHN K. COWAN	Baltimore, Md.

ACADEMIC CALENDAR.

1894-1895.

1894.

October 1.—Beginning of first term Monday.

1895.

January 28-February 2.—Semi-annual examination Monday-Saturday.

February 2.—End of first term Saturday.

May 15.—Examination of candidates for admission as naval
cadets Wednesday.

May 31.—End of academic year, 1894-'95 Friday.

June 3-8.—Annual examination Monday-Saturday.

September 2.—Examination of candidates for admission as Naval
cadets Monday.

October 1.—Beginning of first term, 1895-'96 Tuesday.

The academic months end on the following days:

1894-1895.

October	October 27	February	March 2
November	November 24	March	March 30
December	December 22	April	April 27
January	January 26	May	May 25

1895-1896.

October	October 26	December	December 21
November	November 23	January	January 26

CALENDAR FOR 1894-'95.

SEPTEMBER.

Sun.	M.	T.	W.	T.	F.	Sat.
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

OCTOBER.

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER.

				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

DECEMBER.

						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

JANUARY.

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY.

			6		1	2
3	4	5	7	8	9	
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

MARCH.

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL.

Sun.	M.	T.	W.	T.	F.	Sat.
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY.

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE.

						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

JULY.

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST.

				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER.

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER.

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

OFFICERS

ATTACHED TO THE

UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,

COMMODORE R. L. PHYTHIAN.

Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT-COMMANDER W. T. SWINBURNE.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT-COMMANDER A. ROSS.

Commandant of Cadets and Head of Department of Discipline,

COMMANDER C. M. CHESTER.

LIEUTENANT C. E. COLAHAN, *Assistant.*

LIEUTENANT T. PORTER, *Assistant and Drill Officer.*

LIEUTENANT HUGO OSTERHAUS, *Assistant and Drill Officer.*

LIEUTENANT D. DANIELS, *Assistant and Drill Officer.*

SEAMANSHIP, NAVAL CONSTRUCTION, AND NAVAL TACTICS.

Head of Department,

LIEUTENANT-COMMANDER URIEL SEBREE.

Assistants,

LIEUTENANT-COMMANDER J. D. ADAMS,

LIEUTENANT R. M. DOYLE,

LIEUTENANT DEWITT COFFMAN.

Instructor in Boxing, Swimming, and Gymnastics,

MATTHEW STROHM.

ORDNANCE AND GUNNERY.

Head of Department,

LIEUTENANT ALEXANDER MCCRACKIN.

Assistants,

LIEUTENANT J. H. GLENNON,
 LIEUTENANT F. J. HAESELER,
 ENSIGN J. M. ELICOTT.

Sword Master,

A. J. CORBESIER.

Assistant Sword Masters,

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 G. HEINTZ.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Head of Department,

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LIEUTENANT J. A. NORRIS,
 LIEUTENANT JOHN GIBSON.

STEAM ENGINEERING.

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PASSED ASSISTANT ENGINEER F. J. SCHILL,
 PASSED ASSISTANT ENGINEER F. W. BARTLETT,
 PASSED ASSISTANT ENGINEER L. D. MINER,
 ASSISTANT ENGINEER H. W. JONES,
 ASSISTANT ENGINEER H. O. STRANEY.

MECHANICS AND APPLIED MATHEMATICS.

Head of Department,

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Assistants

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 LIEUTENANT W. H. ALLEN,
 LIEUTENANT HARRY PHILPS.

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 LIEUTENANT T. B. HOWARD,
 LIEUTENANT A. M. KNIGHT,
 ENSIGN W. H. G. BULLARD,
 PROFESSOR PAUL J. DASHIELL, PH. D.

MATHEMATICS.

Head of Department,

COMMANDER ASA WALKER.

Assistants,

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 LIEUTENANT W. V. BRONAUGH,
 ENSIGN B. W. WELLS, JR.,
 ENSIGN S. R. HUELBT,
 ENSIGN A. H. ROBERTSON,
 ENSIGN L. H. CHANDLER.

ENGLISH STUDIES, HISTORY, AND LAW.

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LIEUTENANT PERRY GARST.

Assistants,

LIEUTENANT J. P. PARKER,
 ENSIGN E. W. EBERLE,
 ENSIGN E. H. DUNELL,
 ENSIGN J. F. HUBBARD,
 ENSIGN F. M. BASSETT,
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MODERN LANGUAGES.

Head of Department,

LIEUTENANT G. L. DYER.

Assistants,

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 ASSISTANT PROFESSOR HENRI MARION,
 ASSISTANT PROFESSOR SAMUEL GARNER, PH. D.

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Head of Department,

LIEUTENANT G. P. COLVOCORESSES.

Assistants,

LIEUTENANT C. N. ATWATER,
 PROFESSOR MARSHAL OLIVER,
 ASSISTANT PROFESSOR C. F. BLAUVELT.

BRANCH OF PHYSICAL TRAINING.

In Charge,

SURGEON HENRY G. BEYER, M. D., PH. D.

Professor of Mathematics,

W. W. JOHNSON, A. M.

OFFICERS NOT ATTACHED TO ACADEMIC STAFF.

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 MEDICAL INSPECTOR, T. C. WALTON, M. D.
 SURGEON W. R. DU BOIS, M. D.
 PASSED ASSISTANT SURGEON W. H. RUSH, M. D.
 PASSED ASSISTANT SURGEON S. S. WHITE, M. D.
 PAY DIRECTOR JAMES FULTON, *Pay Officer.*
 PAY DIRECTOR W. GOLDSBOROUGH, *Commissary and General Storekeeper.*
 CHAPLAIN H. H. CLARK, D. D.
 ASSISTANT PROFESSOR A. N. BROWN, *Librarian.*
 J. M. SPENCER, *Assistant Librarian.*
 R. M. CHASE, *Secretary.*
 GUNNER R. SOMMERS.

Battle and Ships,

BOATSWAIN J. S. SINCLAIR.

Mates,

SAMUEL GEE,
 C. J. MURPHY,
 W. G. SMITH.

MARINE OFFICERS

LIEUTENANT COLONEL McLANE ELLIOT *Commanding Marines,*
 CAPTAIN J. M. T. YOUNG,
 FIRST LIEUTENANT C. A. DODGE

ACADEMIC BOARD

THE SUPERINTENDENT
 THE COMMANDANT OF CADETS.
 THE HEAD OF THE DEPARTMENT OF SEAMANSHIP, NAVAL CONSTRUCTION, AND NAVAL TACTICS.
 THE HEAD OF THE DEPARTMENT OF ORDNANCE AND GUNNERY.
 THE HEAD OF THE DEPARTMENT OF ASTRONOMY, NAVIGATION, AND SURVEYING.
 THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.
 THE HEAD OF THE DEPARTMENT OF MECHANICS AND APPLIED MATHEMATICS.
 THE HEAD OF THE DEPARTMENT OF PHYSICS AND CHEMISTRY.
 THE HEAD OF THE DEPARTMENT OF MATHEMATICS.
 THE HEAD OF THE DEPARTMENT OF ENGLISH STUDIES, HISTORY, AND LAW.
 THE HEAD OF THE DEPARTMENT OF MODERN LANGUAGES.
 THE HEAD OF THE DEPARTMENT OF MECHANICAL DRAWING.

CADET OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

CADET LIEUTENANT-COMMANDER,

S. F. SMITH.

CADET LIEUTENANTS,

F. P. BALDWIN,
P. M. BANNON,

W. G. GROESBECK,
H. V. BUTLER, JR.

CADET LIEUTENANT AND ADJUTANT,

W. H. STANDLEY.

CADET LIEUTENANT AND COMMISSARY,

F. H. BRUNBY.

CADET PASSED ASSISTANT ENGINEER,

T. M. DICK.

CADET ENSIGNS (SENIOR),

H. LANING,
A. T. CHESTER,

W. R. GHEKARDI,
J. J. RABY.

CADET ENSIGNS (JUNIOR),

S. C. VESTAL,
M. J. MCCORMACK,

W. C. DAVIDSON,
A. J. WADHAMS.

CADET PETTY OFFICERS OF THE FIRST CLASS.

CADET CHIEF PETTY OFFICER,

W. BAGLEY.

First Division.

D. W. TODD,
R. Z. JOHNSTON, JR.,
S. P. DENNETT,
N. H. HALL.

Second Division.

W. B. IZARD,
J. C. BRECKINRIDGE,
J. E. WALKER,
J. D. SAYERS, JR.

Third Division.

W. R. CUSHMAN,
K. M. BENNETT,
O. S. KNEPPER,
G. H. MANN.

Fourth Division.

J. R. MONAGHAN,
E. H. WATSON,
C. B. BARNES,
M. TAKASAKI.

CADET PETTY OFFICERS OF THE SECOND CLASS.

First Division.

R. H. ROBINSON,
G. S. LINCOLN,
H. S. KIMBALL,
D. W. WURTSBAUGH.

Second Division.

C. L. POOR,
R. EARLE,
T. A. KEARNEY,
A. W. MARSHALL.

Third Division.

C. L. LEIPER,
A. E. KALBACH,
C. E. GILPIN,
E. MCCAULEY, JR.

Fourth Division.

J. H. HOLDEN,
T. T. CRAVEN,
L. C. PALMER,
J. H. JONES.

SUMMER CRUISE, 1894.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP MONONGAHELA.

June 9 to August 30.

COMMANDER C. M. CHESTER, *Commanding.*

LIEUTENANT H. OSTERHAUS, *Executive Officer.*

LIEUTENANT A. M. KNIGHT, *Navigator.*

LIEUTENANT R. M. DOYLE, *Watch Officer.*

LIEUTENANT J. H. GLENNON, *Watch Officer.*

LIEUTENANT J. H. SHIPLEY,* *Watch Officer.*

ENSIGN W. A. EDGAR, *Watch Officer.*

ENSIGN H. F. BRYAN, *Instructor in Navigation.*

ENSIGN S. R. HURLBUT, *Watch Officer.*

SURGEON G. E. H. HARMON.

ASSISTANT SURGEON M. W. BARNUM.

PAYMASTER J. A. RING.

CHAPLAIN H. H. CLARK.

* Detached July 21,

NAVAL CADETS.

First Class—Line Division.

Bagley,	Chester,	Klemann,	Smith, R. F., (a)
Baldwin,	Cushman,	Knepper,	Standley,
Bannon,	Davidson, (b)	Lanig, (b)	Takasaki,
Barnea,	Dennett,	McCormack,	Todd, (c)
Bennett,	Gherardi,	Mann,	Vestal,
Breckinridge,	Grossbeck,	Monaghan,	Wadhams,
Brumby, (b)	Izard,	Raby,	Walker, J. E.,
Butler,	Johnston, R. Z.,	Sayers,	Watson, (d)

Second Class—July 10 to August 3

Bianet,	Gilpin,	Kearney,	Palmer,
Burt,	Hauenstein,	Kimball,	Ridgely,
Coake, (c)	Henry,	Leiper,	Roya,
Crenshaw,	Holden,	Littlefield, (e)	Walker, R. E.,
Dock,	Jeanop,	MacArthur,	Washington,
Fitzgerald,	Kalbach,	McCauley,	Wood,

August 3 to August 27.

Blandy,	Earle,	Marshall, A. W., (f)	Toser,
Bronson,	Ellis,	Middleton,	Volkmar, (e)
Cluvertius,	Jones, J. H.,	Mustin,	Wettengel,
Craven,	Knox, (A)	Poor,	Wurtsbaugh,
Curtin,	Lincoln,	Rice,	
Deane,	McConnell,	Robinson,	

Third Class.

Auding,	Hopburn,	Mahony,	Sargent,
Aserson,	Herndon,	Mayo,	Sexton,
Bagby,	Hilteary,	Miller,	Sheffield,
Boyd,	Holman,	Morse,	Shelton,
Bryant,	Hoopee,	Murfin,	Smith, A. St C.,
Chase,	Houston,	Naylor,	Sykes,
Collins,	Jeffers,	Ogleby,	Terry,
Day,	Jenson,	Overstreet,	Thelen,
DuBoise,	Jones, N. L.,	Owen, A. C.,	Van Orden,
Duncan,	Kautz,	Owens, C. T.,	Ward,
Eggert,	Keenan,	Pattison,	Webber,
Falconer,	Kempff,	Perrill,	Wells, H. T.,
Giles,	Landis,	Powell,	Wessels,
Graeme,	Leahy,	Pratt,	White,
Graham,	McCarthy,	Preacey,	Williams, H.,
Green, (t)	McDowell,	Reynolds,	Yarnell,
Hart,	McMullen,	Richardson,	
Henderson,	Magill,	Rochie,	

Fourth Class.

Applewhite,	Kison,	Johnson, T. L.,	Tardy,
Arnold,	Graham, J. S.,	Lebfeldt,	Thorpe, (d)
Bruckway,	Falk,	Marble,	Webber, C. H.,
Brown, M. H.,	Faller,	Morris,	Wells, W. H.,
Bysum,	Gilmer,	Nelson,	Wilcox,
Conston,	Hanrahan,	Peterson,	Woods, E.,
Danger,	Hord,	Rutledge,	
Kibbett,	Hunter,	Shockley,	

a Granted sick leave from August 19.

b Granted sick leave from August 26.

c Transferred to naval hospital, Norfolk, Va., August 3.

d Sent to hospital at Newport, R. I., August 1.

e Granted permission to return to Academy, August 20, to prepare for re-examination.

f Granted leave from August 29.

g Granted leave from August 18.

h Granted leave from August 6.

i Transferred to naval hospital, Norfolk, Va., August 7.

SYNOPSIS OF THE CRUISE, 1894.

MONONGAHELA.

Cadets, first class, line division, and the third and fourth classes embarked June 9.

Sailed from Annapolis, June 11.

Sailed from Lynnhaven Bay for three weeks' cruise at sea, June 16.

Returned to Fortress Monroe, July 7.

On arrival of *Bancroft*, July 10, transferred 16 members of the first class, line division, to her, and received 24 members of the second class.

Put to sea, July 12, cruising off the capes of the Chesapeake.

Returned to Fortress Monroe, August 3, met *Bancroft*, and exchanged the remaining half of the first and second classes for those who joined her July 10.

Put to sea on August 7.

Returned to Hampton Roads, August 18.

Anchored off South River, Md., August 24.

Arrived at Annapolis, August 30.

BANCROFT.

Cadets, first class, engineer division, and the second class embarked July 7.

Sailed from Annapolis, July 9. Hampton Roads, same day.

Met *Monongahela*; exchanged part of second class for half of first class, line division. Norfolk navy-yard, July 10. Philadelphia, July 14. Sailed July 19. Navy-yard, New York, July 21. Sailed July 26; arrived at Newport torpedo station same day. Hampton Roads, August 3; exchanged cadets with *Monongahela*. Norfolk navy-yard, August 7. Philadelphia, August 10. New York navy-yard, August 17. Hampton Roads August 24. Annapolis, August 30.

UNITED STATES PRACTICE SHIP BANCROFT.

[July 7 to August 30.]

LIEUTENANT-COMMANDER R. R. INGERSOLL, *Commanding.*

LIEUTENANT S. C. PAINE, *Executive Officer.*

SURGEON H. F. BEYER.

LIEUTENANT M. L. WOOD, *Navigator.*

PASSED ASSISTANT ENGINEER W. F. WORTHINGTON.

ENSIGN W. H. G. BULLARD, *Instructor.*

ASSISTANT ENGINEER H. W. JONES.

NAVAL CADETS.

First Class—Line Division.

July 10 to August 3.

August 3 to August 30.

Bennett,
Breckinridge,
Brumby,
Cushman,
Davidson,
Klemann,
Knepper,
Laning,
McCormack,
Mann,
Raby,
Smith, S. F.,
Standley,
Vestal,
Walker, J. E.

Bagley.
Baldwin,
Bannon,
Barnes,
Butler,
Chester,
Dennett,
Gherardi,

Groesbeck,
Isard,
Johnston, R. Z.,
Monaghan,
Sayers,
Takasaki,
Wadhams.

First Class—Engineer Division.

July 7 to August 30.

Dick,
Dunn,
Eckhardt,
Freeman,
Garrison,
Karna,
Mallory.

Mansfield,
Marshall, J. F., Jr.,
Merritt,

Morton,
Walker, C. H.,
Williams, H. C.

Second Class.

July 7 to August 5.

August 5 to August 27.

Blandy,	McConnell,	Bisset,	Kearney,
Bronson,	Marshall, A. W.,	Burt,	Kimball,
Castleman, (a)	Middleton,	Cook,	Leiper,
Cluverius,	Mustin,	Crenshaw,	Littlefield,
Craven,	Poor,	Doak,	MacArthur,
Curtis,	Rice,	Fitzgerald,	McCauley,
Deane,	Robinson,	Gilpin,	Palmer,
Earle,	Tausig, (b)	Hauenstein,	Ridgely,
Ellis,	Toner,	Henry,	Roya,
Jones, J. H.,	Volkmar,	Holden,	Walker R. E.,
Knox,	Wettengel,	Jessup,	Washington,
Lincoln,	Wurtsbaugh	Kalbach,	Wood

PRACTICAL INSTRUCTION AT NAVAL ACADEMY.

WORK IN MACHINE SHOP FROM JUNE 11 TO JULY 7.

Naval cadets of first class, engineer division	1
Naval cadets of second class	6

SUMMARY.

On board practice ships <i>Manungahela</i> and <i>Bancroft</i>	15
Absent on sick leave .....	.
Total	15

a Transferred to naval hospital, New York, July 23

b Died July 22, navy yard, New York

CLASSES OF THE NAVAL CADETS

AT THE BEGINNING OF THE ACADEMIC YEAR, 1894-'95.

[Corrected to October 4, 1894.]

Naval cadets of the class appointed in 1889, performing required service afloat—Line Division—35 members.

Order of general merit.	Name.	State from which appointed.	Date of admission.
*1	Powelson, Wilfrid Van Nest	New York	Sept. 5, 1889
*2	Montgomery, William Slack	Kentucky	Sept. 5, 1889
*3	Elder, Edwin Avery	Massachusetts	May 21, 1889
4	Clark, Frank Hodges, jr.	Rhode Island	Sept. 5, 1889
5	Ward, Henry Heber	New Jersey	Sept. 7, 1889
6	Perry, Joseph Albert	Illinois	Sept. 6, 1889
7	Biaset, Eugene Leo	Kentucky	Oct. 2, 1889
8	Crosley, Walter Selwyn	Connecticut	Sept. 9, 1889
9	Lang, Charles Jonas	Pennsylvania	Sept. 6, 1889
10	Campbell, Edward Hale	Indiana	Sept. 6, 1889
11	Magill, Louis John	Pennsylvania	Nov. 11, 1889
12	Berry, David Mark	California	Sept. 6, 1889
13	Wilson, Thomas Sheldon	Illinois	May 20, 1889
14	Doddridge, John Schon	West Virginia	Sept. 7, 1889
15	Pearson, Henry Allen	Utah	Sept. 6, 1889
16	Gies, William Kern	Illinois	June 14, 1889
17	Cook, Allen Merriam	Kansas	May 22, 1889
18	Chadwick, Frank Laird	Minnesota	May 18, 1889
19	Fewel, Christopher Catron	Texas	Oct. 2, 1889
20	Olmsted, Percy Napier	Oregon	May 21, 1889
21	Jackson, Orton Porter	Pennsylvania	May 18, 1889
22	Powell, William Glasgow	New Jersey	May 18, 1889
23	Douglas, Richard Spencer	Georgia	June 3, 1889
24	Upham, Frank Brooks	Montana	Sept. 6, 1889
25	Sticht, John Low	New York	Sept. 7, 1889
26	Ryan, John Paul Joseph	New York	May 22, 1889
27	Morris, John Ramsay	Missouri	Sept. 7, 1889
28	Wells, Chester	Pennsylvania	Nov. 15, 1889
29	Holsinger, Gerald Long	Kansas	Oct. 3, 1889
30	McKethau, Alfred Augustus	North Carolina	Sept. 5, 1889
31	Pollock, Emmett Biddle	Illinois	May 18, 1889
32	Potter, James Boyd	New Jersey	Sept. 5, 1889
33	Pratt, Alfred Allen	Illinois	Sept. 7, 1889
34	Carver, Marvin	Minnesota	Sept. 27, 1889
35	Procter, André Morton	Kentucky	Sept. 6, 1889

Engineer Division—6 members.

*1	Nutting, Daniel Chaplin, jr.	Kansas	May 21, 1889
2	Peugnet, Maurice Berthold	Missouri	Sept. 7, 1889
3	Price, Henry Bertrand	Iowa	May 20, 1889
4	Trench, Martin Edward	Minnesota	Oct. 3, 1889
5	Brady, John Richard	Pennsylvania	Sept. 6, 1889
6	Read, Frank De Witt	Ohio	Sept. 6, 1889

*Naval Cadets of the class appointed in 1890, performing required service afloat—100
Division—34 members.*

Order of gen- eral merit.	Name.	State from which appointed.	Date of admission.
1	Robert, William Pierre	Mississippi	May 2
2	Cox, Daniel Hargate	New York	Sept. 6
3	Gillie, Irvin Van Gorder	New York	Sept. 6
4	Roberts, Thomas Gaines	Alabama	May 27
5	Sellers, David Foote	New Mexico	May 21
6	Adams, Lawrence Stowell	Pennsylvania	Sept. 28
7	Stone, Raymond	Alabama	Sept. 5
8	Tompkins, John Thomas	Louisiana	Sept. 6
9	McLean, Ridley	Tennessee	May 30
10	Webster, Charles	Massachusetts	Sept. 6
11	Babin, Provocat	New York	Sept. 6
12	Churchill, Winston	Missouri	May 21
13	Jones, Lewis Burton	New York	May 21
14	Fullinwider, Simon Peter	Missouri	May 21
15	Graham, Stephen Victor	Michigan	May 19
16	Bennett, Ernest Linwood	Massachusetts	Sept. 24
17	Luby, John McClane	Texas	Sept. 6
18	Sandoz, Fritz Louis	Louisiana	May 19
19	Galbraith, Gilbert Smith	Pennsylvania	Sept. 6
20	Shaw, Melville Jones	Minnesota	Sept. 6
21	Kavanagh, Arthur Glynn	Nebraska	May 29
22	Hookwalter, Charles Sumner	Illinois	Sept. 6
23	Scott, William Pitt	Pennsylvania	May 29
24	Snow, Carlton Farwell	Maine	May 10
25	Gibson, Robert Hatfield	New York	May 21
26	Spear, Roscoe	Pennsylvania	May 21
27	Manson, Walter James	Louisiana	Sept. 6
28	McNeely, Robert Whitehead	North Carolina	Sept. 6
29	Turpin, Walter Stevens	Maryland	May 22
30	Bulmer, Roscoe Carlyle	Nevada	Sept. 24
31	Whitted, William Scott	North Carolina	May 20
32	Stone, George Loring Porter	Georgia	Sept. 24
33	Giehn, George Earl	New York	May 22
34	England, Clarence	Arkansas	Sept. 5

Engineer Division—13 members.

1	Hodgins, John Milton	Virginia	Sept. 6
2	McMorris, Boring Kavanaugh	Alabama	Sept. 12
3	Hinds, Alfred Walton	Alabama	Sept. 6
4	Mundy, Roscoe Charles	Maine	Sept. 6
5	Cooper, Ignatius Taylor	Delaware	May 30
6	Baker, Henry Thomas	Ohio	Oct. 7
7	Chappell, Ralph Hubert	Michigan	May 22
8	James, Leland Frierson	South Carolina	Sept. 6
9	Lyon, Frank	Kentucky	May 20
10	Reeve, Joseph Mason	Illinois	Sept. 6
11	Coe, Hutch Ingham	Florida	Sept. 1
12	Winkip, Emory	Georgia	June 1
13	De Lany, Edwin Hayden	Tennessee	May 21

Naval Cadets of the First Class—Line Division—33 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Bagley, Worth	North Carolina	Sept. 7, 1891	5	15
Baldwin, Frank Pardee	New Jersey	Sept. 8, 1891	5	15
Bannon, Philip Michael	Maryland	May 19, 1891	8	3
Barnes, Cassius Bartlett	Oklahoma	Sept. 7, 1891	5	2
Bennett, Kenneth Marratt	New Jersey	Sept. 8, 1891	5	15
Breckinridge, Joseph Cabell	Kentucky	Sept. 8, 1891	5	15
Brunby, Frank Hardeman	Georgia	Sept. 8, 1891	5	11
Butler, Henry Varnum, Jr.	New York	Sept. 5, 1891	5	15
Chester, Arthur Tremaine	At large	May 19, 1890	5	25
Cushman, William Reynolds	New York	Sept. 5, 1891	5	15
Davidson, William Christopher	South Dakota	Sept. 28, 1891	5	11
Dennett, Stanley Pullen	Maine	Sept. 5, 1891	5	15
Gherardi, Walter Rockwell	At large	Sept. 4, 1891	5	15
Groesbeck, William Gerard	Ohio	Sept. 4, 1891	5	15
Hall, Newt Hamill	Texas	Sept. 7, 1891	2	22
Izard, Walter Blake	South Carolina	Sept. 7, 1891	5	15
Johnston, Rufus Zenas, Jr.	North Carolina	Sept. 10, 1891	5	15
Klemm, John Valentine	New York	Sept. 10, 1891	5	15
Knepper, Orio Smith	Pennsylvania	Sept. 4, 1891	5	15
Laning, Harris	Illinois	May 19, 1891	8	4
McCormack, Michael James	Michigan	Sept. 8, 1891	5	15
Mann, George Hiram	Pennsylvania	Sept. 6, 1890	7	13
Monaghan, John Robert	Washington	Sept. 7, 1891	5	15
Raby, James Joseph	Michigan	Sept. 9, 1891	5	15
Sayers, Joseph Draper, Jr.	New York	Sept. 5, 1891	5	15
Smith, Stuart Farrar	Pennsylvania	Sept. 4, 1891	5	4
Standley, William Harry	California	Sept. 7, 1891	5	15
Takasaki, Motohiko	Empire of Japan	May 20, 1891	5	15
Todd, David Wooster	California	Sept. 8, 1891	4	18
Vestal, Samuel Curtis	Indiana	May 19, 1891	8	8
Wadhams, Albion James	New York	Sept. 4, 1891	5	15
Walker, James Erling	North Carolina	Sept. 7, 1891	5	15
Watson, Edward Howe	Kentucky	Sept. 7, 1891	4	15

Engineer Division—12 members.

Dick, Thomas Merritt	South Carolina	Sept. 5, 1891	4	17
Dunn, Edward Howard	Connecticut	Sept. 5, 1891	5	15
Eckhardt, Ernest Frederick	Wisconsin	Sept. 5, 1891	5	15
Freeman, Frederick Newton	Indiana	Sept. 9, 1891	4	17
Garrison, Daniel Mershon	New Jersey	June 1, 1891	7	8
Karns, Franklin D	Ohio	Sept. 30, 1891	4	17
Mallory, Charles King	Tennessee	Sept. 25, 1891	4	17
Mansfield, Newton	Ohio	Sept. 7, 1891	4	17
Marshall John Francis, jr	Texas	Sept. 8, 1891	4	17
Merritt Darwin Robert	Iowa	Sept. 10, 1891	4	17
Morton James Proctor	Missouri	Sept. 9, 1891	4	17
Walker Charles Henry	Massachusetts	Sept. 8, 1891	4	

Naval Cadets of the Second Class—47 members.

Name.	State from which appointed.	Date of admission.	Served in practice ships	
			Months	Days
Blaet, Henry Overstreet	Maryland	Sept. 6, 1892	4 .....	..
Blandy, Edwin Chauncey	Pennsylvania	May 19, 1891	10 .....	..
Bronson, Anon. Jr.	Nebraska	Sept. 20, 1892	4 .....	..
Burt, Charles Perry	Georgia	Sept. 6, 1892	4 .....	..
Castleman, Kenneth Galleher	Kentucky	Sept. 6, 1892	3 .....	..
Cluverius, Wat Tyler, Jr.	Louisiana	May 20, 1892	7 .....	..
Cooke, Robert Powell Page	Virginia	Sept. 16, 1892	4 .....	..
Craven, Thomas Tingey	New Hampshire	Sept. 19, 1892	4 .....	..
Crenshaw, Arthur	Alabama	Sept. 6, 1892	4 .....	..
Curtin, Roland Irvin	Pennsylvania	Sept. 6, 1892	4 .....	..
Deane, Russell Andrews	New York	May 20, 1892	7 .....	..
Donk, Henry Melville, Jr.	Tennessee	Sept. 19, 1892	4 .....	..
Earle, Ralph	Massachusetts	Sept. 6, 1892	4 .....	..
Ellis, Mark Saint Clair	Arkansas	July 1, 1892	5 .....	..
Fitzgerald, Edward Thomas	Texas	Sept. 14, 1892	4 .....	..
Gilpin, Charles Edward	Michigan	Sept. 6, 1892	4 .....	..
Hausenstein, George Jacob	Mississippi	Sept. 6, 1892	4 .....	..
Henry, James Buchanan, Jr.	New York	Sept. 6, 1892	4 .....	..
Holden, Jonas Hannibal	Vermont	May 20, 1892	7 .....	..
Jacobs, Earl Perry	West Virginia	Sept. 6, 1892	4 .....	..
James Junius Henry	Virginia	Sept. 19, 1892	4 .....	..
Kalbach, Andrew Edwin	Pennsylvania	July 1, 1892	5 .....	..
Kearney, Thomas Albert	Missouri	Sept. 6, 1892	4 .....	..
Kimball, Henry Swift	Massachusetts	Sept. 6, 1892	4 .....	..
Knox, Dudley Wright	Tennessee	Sept. 6, 1892	4 .....	..
Leiper, Charles Lewis	Pennsylvania	Sept. 6, 1892	4 .....	..
Lincoln, Gatewood Sanders	Missouri	May 20, 1892	7 .....	..
Littlefield, William Lord	Massachusetts	Sept. 20, 1892	4 .....	..
MacArthur, Arthur, Jr., Jr.	Wisconsin	Sept. 6, 1892	4 .....	..
McCauley, Edward, Jr.	New York	Oct. 10, 1892	4 .....	..
McConnell, Richard Gray	Pennsylvania	May 20, 1892	7 .....	..
Marshall, Albert Ware	Texas	Sept. 6, 1892	4 .....	..
Middleton, George Izard	South Carolina	Sept. 9, 1892	1 .....	..
Mustin, Henry Croskey	Tennessee	Sept. 6, 1892	4 .....	..
Palmer, Leigh Carlyle	Missouri	Sept. 6, 1892	4 .....	..
Poor, Charles Longstreet	New York	Sept. 6, 1892	4 .....	..
Rae, George Benjamin	Kentucky	Sept. 6, 1892	4 .....	..
Reidely, Frank Eugene	At large	Sept. 6, 1892	4 .....	..
Robinson, Richard Hallitt	Ohio	Sept. 6, 1892	4 .....	..
Roy, John Holley	New York	Sept. 6, 1892	4 .....	..
Toner, Charles Maxson	New York	Sept. 19, 1892	4 .....	..
Volkmar, Walter Schuyler	Pennsylvania	Sept. 6, 1892	4 .....	..
Walker, Ralph Eric	Indiana	May 20, 1892	7 .....	..
Washington, Pope	North Carolina	Sept. 7, 1892	4 .....	..
Wetteng, Ivan Cyrus	Colorado	Sept. 6, 1892	4 .....	..
Wood, Duncan Mahon	Alabama	Sept. 20, 1892	4 .....	..
Wurtsbaugh, Daniel Wilbert	Texas	May 20, 1892	7 .....	..

Naval Cadets of the Third Class—67 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Anding, Sheldon Webb	Mississippi	May 19, 1893	5	20
Asserson, William Christian	New York	Sept. 25, 1893	2	23
Bagby, Robert Coleman	Missouri	Sept. 22, 1893	2	23
Boyd, David French, jr.	Alabama	May 19, 1893	5	20
Bryant, Samuel Woods	Pennsylvania	May 19, 1893	5	20
Chase, Gilbert	Virginia	Sept. 6, 1893	2	23
Collins, Henry Lafayette	Pennsylvania	Sept. 6, 1893	2	23
Day, John Arthur	New York	May 19, 1893	5	20
DuBose, William Gunnell	Georgia	Sept. 6, 1893	2	23
Duncan, Oscar Dibble	Alabama	Sept. 6, 1893	2	23
Eggert, Ernest Frederick	Michigan	Sept. 6, 1893	2	23
Falconer, Walter Maxwell	Ohio	Sept. 6, 1893	2	23
Giles, William Pinkney	Texas	May 20, 1893	5	20
Graeme, Joseph Wright	Pennsylvania	Sept. 6, 1893	2	23
Graham, Andrew Thomas	Illinois	Sept. 6, 1893	2	23
Hart, Thomas Charles	Michigan	May 19, 1893	5	20
Henderson, Robert William	Ohio	Sept. 22, 1893	2	23
Hepburn, Arthur Japy	Pennsylvania	Sept. 22, 1893	2	23
Herndon, Henry Raymond	Texas	May 19, 1893	5	20
Hilleary, John Francis	Maryland	Sept. 6, 1893	2	23
Holman, Frederic Ralph	Iowa	May 19, 1893	5	20
Hoopes, Edward Trimble	Pennsylvania	Sept. 6, 1893	2	23
Houston, Victor Stuart	South Dakota	Sept. 22, 1893	2	23
Jenson, Henry Norman	Wisconsin	Sept. 6, 1893	2	23
Jones, Needham Lee	Mississippi	Sept. 6, 1893	2	23
Kautz, Austin	Washington	May 19, 1893	5	20
Keenan, Ernest Clinton	New York	Sept. 6, 1893	2	23
Kempff, Clarence Selby	California	May 19, 1893	5	20
Landis, Irwin Franklin	Kansas	Sept. 6, 1893	2	23
Leahy, William Daniel	Wisconsin	May 19, 1893	5	20
McCarthy, Albert Henry	Iowa	Sept. 6, 1893	2	23
McDowell, Willis	Pennsylvania	May 19, 1893	5	20
McMullen, Stanley Hastings	Indiana	May 19, 1893	5	20
Magill, Samuel George, jr.	North Dakota	May 19, 1893	5	20
Mahony, Daniel Sullivan	Michigan	Sept. 6, 1893	2	23
Mayo, Henry Wise	Virginia	May 19, 1893	5	20
Miller, Cyrus Robinson	California	Sept. 6, 1893	2	23
Morse, John Wise	Massachusetts	Sept. 6, 1893	2	23
Murfin, Orin Gould	Ohio	Sept. 6, 1893	2	23
Naylor, Charles Jacob	Pennsylvania	Sept. 6, 1893	2	23
Overstreet, Luther Martin	Nebraska	Sept. 6, 1893	2	23
Owen, Alfred Crosby	District of Columbia	Sept. 6, 1893	2	23
Owens, Charles Trussdale	Pennsylvania	Sept. 6, 1893	2	23
Pattison, Dilly Nelson	Iowa	Sept. 6, 1893	2	23
Perrill, Harlan Page	Indiana	Sept. 6, 1893	2	23
Powell, Joseph Wright	New York	May 19, 1893	5	20
Pratt, Peter Lloyd	Illinois	May 19, 1893	5	20
Prosser, Alfred Warren	Nebraska	May 19, 1893	5	20
Reynolds, William Herbert	Georgia	Sept. 6, 1893	2	23

Naval Cadets of the Third Class—67 members—Continued.

Name.	State from which appointed.	Date of admission.	Sea service in previous ships	
			Months.	Days.
Richardson, Louis Clark	South Carolina	Sept. 6, 1893	2	13
Roehle, Clifton Charles	Maryland	Sept. 6, 1893	2	11
Sargent, Leonard Rundlett	Minnesota	Sept. 6, 1893	2	11
Sexton, Walton Roswell	Illinois	May 19, 1893	5	9
Sheffield, Fletcher Lamar	Georgia	Sept. 6, 1893	2	11
Shelton, Nathan Jordan	Nebraska	Sept. 6, 1893	2	11
Smith, Arthur St. Clair, jr	Iowa	Sept. 6, 1893	2	11
Sykes, Eugene Octave, jr	Mississippi	May 19, 1893	5	9
Terry, Joseph Dandridge	Virginia	May 19, 1893	5	9
Thelton, David Elias	Wisconsin	Sept. 6, 1893	2	11
Van Orden, George	Michigan	May 19, 1893	5	9
Ward, Joshua Thomason	Texas	May 19, 1893	5	9
Webber, George	Arkansas	Sept. 6, 1893	2	11
Wells, Horace Taylor	Missouri	Sept. 6, 1893	2	11
Weesele, Arthur Lewis	Iowa	May 19, 1893	5	9
White, William Russell	Arizona	Sept. 6, 1893	2	11
Williams, Hilary	Indiana	Sept. 6, 1893	2	11
Yarnell, Harry Ervin	Iowa	Sept. 6, 1893	2	11

Naval Cadets of the Fourth Class—83 members.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
Abele, Clarence Arthur.....	Massachusetts.....	Sept. 6, 1894	17	10	0	0
Applewhite, Scott Carter.....	Indiana.....	May 19, 1894	18	4	2	23
Arnold, William Wood.....	New Jersey.....	May 19, 1894	17	7	2	23
Babcock, John Franklin.....	New York.....	Sept. 22, 1894	15	0	0	0
Ball, William Gustin.....	Ohio.....	Sept. 22, 1894	19	5	0	0
Bissell, Henry Harrison.....	New York.....	Sept. 6, 1894	18	6	0	0
Bonnaffon, Sylvester.....	Pennsylvania.....	Sept. 6, 1894	18	10	0	0
Boone, Charles.....	Ohio.....	Sept. 6, 1894	17	11	0	0
Briggs, Wilbur Gerheart.....	New York.....	Sept. 6, 1894	18	7	0	0
Briggs, Zeno Everett.....	Nebraska.....	Sept. 22, 1894	17	11	0	0
Brockway, Benjamin Little.....	South Carolina.....	Sept. 6, 1893	18	9	0	0
Brown, George, jr.....	At large.....	Sept. 6, 1893	18	1	0	0
Brown, Josephus Jarvis.....	Illinois.....	Sept. 6, 1894	16	7	0	0
Brown, Morris Hamilton.....	Indiana.....	May 19, 1894	17	6	2	23
Bynum, Dixon Hinde.....	Indiana.....	May 19, 1894	17	9	2	23
Caffery, John Murphy.....	Louisiana.....	Sept. 6, 1894	16	11	0	0
Constien, Edward Theodore.....	Pennsylvania.....	May 19, 1894	18	6	2	23
Cotten, Lyman Atkinson.....	North Carolina.....	Sept. 6, 1894	19	8	0	0
Cronan, William Pigott.....	Connecticut.....	Sept. 6, 1894	15	7	0	0
Dinger, Henry Charles.....	Wisconsin.....	May 19, 1894	18	2	2	23
Durham, Raymond Ewing.....	At large.....	Sept. 22, 1894	16	9	0	0
Eisbain, Arthur.....	New York.....	May 19, 1894	19	11	2	23
Elson, Herman Jacob.....	Mississippi.....	May 19, 1894	18	4	2	23
England, William Herbert.....	Arkansas.....	Sept. 6, 1894	17	10	0	0
Evans, Frank Taylor.....	At large.....	Sept. 6, 1894	18	11	0	0
Faller, Guy William.....	Wisconsin.....	May 19, 1894	16	1	2	23
Farrin, Thomas Benjamin, Jr.....	Illinois.....	Sept. 22, 1894	17	7	0	0
Field, Francis Louie.....	Indiana.....	Sept. 22, 1894	15	1	0	0
Fox, Lynn Herbert.....	Wisconsin.....	Sept. 6, 1894	18	9	0	0
Gilmer, James Blair.....	Virginia.....	May 19, 1894	18	2	2	23
Gleason, Henry Miller.....	Kansas.....	Sept. 6, 1894	17	11	0	0
Graham, John Sisson.....	Colorado.....	May 19, 1894	19	1	2	23
Halligan, John, Jr.....	Massachusetts.....	Sept. 6, 1894	18	3	0	0
Hand, James Alexander, Jr.....	South Dakota.....	Sept. 6, 1894	18	11	0	0
Hanrahan, David Carlisle.....	Wisconsin.....	May 19, 1894	18	9	2	23
Hord, Oliver Saunders.....	Kentucky.....	May 19, 1894	18	3	2	23
Hunter, Charles Milton.....	Ohio.....	May 19, 1894	10	8	2	23
Huntington, Arthur Franklin.....	New York.....	Sept. 12, 1894	17	6	0	0
Jeffries, James Gordon.....	Arkansas.....	Sept. 6, 1894	18	3	0	0
Johnson, Thomas Lee.....	Kansas.....	May 19, 1894	19	1	2	23
Kress, James Chatham.....	Pennsylvania.....	Sept. 6, 1894	17	3	0	0
Lehfeldt, Henry August.....	Wisconsin.....	May 19, 1894	18	5	2	23
Love, James Monroe, Jr.....	Virginia.....	Sept. 6, 1894	19	6	0	0
McCarty, Sterling Hicks.....	Missouri.....	Sept. 6, 1894	18	7	0	0
McIntyre, Edward William.....	California.....	Sept. 6, 1894	17	6	0	0
Macy, Ulysses Samuel.....	Missouri.....	Sept. 6, 1894	17	8	0	0
Madison, Zachariah Harvey.....	Illinois.....	Sept. 6, 1894	17	8	0	0
Mannix, Daniel Pratt.....	Ohio.....	Sept. 6, 1894	16	0	0	0
Marble, Ralph Norris, Jr.....	Minnesota.....	May 19, 1894	15	2	2	23
Mitchell, Alexander Neely.....	Ohio.....	Sept. 6, 1894	18	11	0	0

Naval Cadets of the Fourth Class—83 members—Continued.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Seniority in previous ship.	
			Years.	Months.	Months.	Days.
Moore, William Augustus	South Carolina ..	Sept. 22, 1894	19	0	0	
Morris, Bennie	Virginia	Mar. 4, 1894	19	11	2	
Nelson, Charles Preston	Massachusetts ..	May 19, 1894	17	3	1	
Peterson, Roscoe Lloyd	Michigan	June 1, 1894	17	10	2	
Pettengill, George Tilford	Idaho—at large ..	Sept. 22, 1894	16	10	0	
Pinney, Frank Lucius	Connecticut	Sept. 6, 1894	19	9	0	
Purse, Henry Ashby	Georgia	Sept. 6, 1894	16	3	0	
Reifsnider, John	Ohio	Sept. 6, 1894	17	9	1	
Roper, Walter Gordon	Georgia	Sept. 22, 1894	18	11	0	
Rutledge, Carl Clyde	Ohio	May 19, 1894	17	7	2	
Sayles, William Randall, Jr.	Rhode Island	Sept. 29, 1894	16	9		
Schofield, John Anderson	Missouri	Sept. 6, 1894	18	6	1	
Shane, Louis	Nebraska	Sept. 6, 1894	17	4	1	
Shay, Louis Berry	New York	Sept. 6, 1894	19	3		
Shockley, Augustus Wroten	Kansas	May 12, 1894	19	11	2	
Small, Jesse McLean	Kentucky	Sept. 12, 1894	16	0	1	
Smith, George Leonard	New Hampshire ..	Sept. 6, 1894	18	0	1	
Stogdill, James Ellery	Indiana	Sept. 22, 1894	19	3	0	
Sweet, George Cook	New York	Sept. 22, 1894	17	3	0	
Tardy, Walter Benjamin	Arkansas	May 19, 1894	18	11	2	
Tarrant, William Theodore	Texas	Sept. 6, 1894	16	1	1	
Taylor, Hugh Kirkpatrick	Ohio	Sept. 22, 1894	19	7	0	
Thorpe, George Cyrus	Minnesota	May 19, 1894	19	4	2	
Tottenham, John William	Texas	Sept. 6, 1894	16	7	0	
Turner, Laurin Hamilton	Illinois	Sept. 6, 1894	17	5	0	
Watts, William Carleton	Pennsylvania	Sept. 22, 1894	15	2	1	
Webber, Charles H.	Michigan	May 19, 1894	18	7	2	
Wells, William Benefiel	Iowa	May 19, 1894	17	4	2	
Wilcox, Luther Thomas	Illinois	May 19, 1894	19	4	2	
Williams, Henry	Maryland	Sept. 6, 1894	17	0	0	
Williams, Yancey Sullivan	South Carolina ..	Sept. 6, 1894	18	4	0	
Woods, Edward	Massachusetts ..	May 19, 1894	18	6	2	
Wright, Henry Tutwiler	Alabama	Sept. 6, 1894	19	8	0	

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

	October 1894	Members
First Class (Line Division)	2
First Class (Engineer Division)	2
Second Class	2
Third Class	2
Fourth Class	2
Total	10

RELATIVE STANDING OF NAVAL CADETS FOR 1893-'94.

Classes of the Naval Cadets at the United States Naval Academy, at the close of the Academic Year 1893-'94; with the relative standing of the members in each class, as determined at the Annual Examination, June, 1894.

P Physically disqualified for the naval service.

" Received 85 per cent of the multiple.

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for Engineer Division.

l Honorably discharged at end of four years' course.

r Resigned.

s Sick, continued with next lower class.

Relative Standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.	Age at date of admission.	
				Years.	Months.
* 4	Adams, Lawrence Stowell	Pennsylvania	Sept. 26, 1890	13	
12	Babin, Prevost	New York	Sept. 6, 1890	16	
20	Bennett, Ernest Linwood	Massachusetts	Sept. 24, 1890	17	
22	Bookwalter, Charles Sumner	Illinois	Sept. 6, 1890	16	
23	Bolmer, Roscoe Carlyle	Nevada	Sept. 26, 1890	15	
15	Churchill, Winston	Missouri	May 21, 1890	16	
* 3	Cox, Daniel Hargate	New York	Sept. 9, 1890	17	
32	England, Clarence	Arkansas	Sept. 5, 1890	16	
17	Fallinwider, Simon Peter	Missouri	May 21, 1890	16	
19	Galbraith, Gilbert Smith	Pennsylvania	Sept. 8, 1890	16	
29	Gelm, George Earl	New York	May 22, 1890	19	
* 2	Gillis, Irvin Van Gorder	New York	Sept. 6, 1890	15	
14	Graham, Stephen Victor	Michigan	May 19, 1890	16	
11	Jones, Lewis Burton	New York	May 21, 1890	17	
21	Kavanagh, Arthur Glynn	Nebraska	May 20, 1890	19	
16	Luby, John McClane	Texas	Sept. 8, 1890	16	
8	McLean, Ridley	Tennessee	May 20, 1890	17	
31	McNeely, Robert Whitehead	North Carolina	Sept. 8, 1890	17	
24	Manion, Walter James	Louisiana	Sept. 6, 1890	17	
25	Osborn, Robert Hatfield	New York	May 22, 1890	16	
* 1	Robert, William Pierre	Mississippi	May 20, 1890	16	
10	Roberts, Thomas Galnea	Alabama	May 27, 1890	19	
24	Sandoz, Fritz Louis	Louisiana	May 19, 1890	16	
13	Scott, William Pitt	Pennsylvania	May 20, 1890	16	
7	Sellers, David Foote	New Mexico	May 21, 1890	16	
28	Shaw, Melville Jones	Minnesota	Sept. 6, 1890	18	
18	Shaw, Carlton Farwell	Maine	May 19, 1890	16	
20	Sparr, Roscoe	Pennsylvania	May 22, 1890	19	
26	Steele, George Loring Porter	Georgia	Sept. 28, 1890	15	
6	Steele, Raymond	Alabama	Sept. 5, 1890	17	
9	Tompkins, John Thomas	Louisiana	Sept. 6, 1890	19	
21	Turpin, Walter Stevens	Maryland	May 22, 1890	15	
* 5	Webster, Charles	Massachusetts	Sept. 6, 1890	16	
27	Whitted, William Scott	North Carolina	May 20, 1890	19	

Line Division—34 Members—Annual Examination, June, 1894.

Order of merit in—										Sea service in practice ships.			
Seamanship, naval construction, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Discipline.	Number of demerits.	Months.	Days.	Order of annual merit.
1	3	7	5	5	2	8	8	13	7	37	5	20	4
7	16	14	17	4	13	7	11	20	16	28	5	20	12
15	4	23	14	12	21	17	18	30	31	09	5	20	20
22	23	21	26	20	0	15	23	28	27	80	5	20	22
20	11	32	22	21	34	26	16	24	13	23	5	20	23
23	11	19	19	7	15	12	22	24	11	27	5	20	15
3	5	4	7	10	4	4	6	6	5	19	5	20	*3
32	10	31	34	13	21	25	21	21	32	108	5	20	32
18	8	21	27	24	11	16	19	28	8	27	5	20	17
16	27	13	10	33	29	24	26	17	18	38	5	20	19
26	21	28	53	25	33	34	29	31	20	49	5	20	29
5	7	1	1	1	1	3	6	10	3	9	5	11	*2
14	15	12	11	17	16	14	8	22	29	95	5	20	14
7	24	16	13	8	8	11	15	7	8	12	5	20	11
27	17	25	29	17	14	20	26	26	34	172	5	20	33
21	24	10	15	31	24	23	23	27	19	38	5	20	16
11	11	6	8	6	6	5	3	5	25	74	5	20	8
25	28	27	23	27	31	19	19	8	33	125	5	20	31
33	17	34	32	28	28	31	32	13	22	40	5	20	34
18	26	20	29	34	26	30	34	34	21	46	5	20	25
2	1	2	2	2	3	1	1	1	1	3	5	20	*1
11	8	14	10	15	7	12	14	12	12	22	5	20	10
28	22	30	28	13	18	29	4	19	13	16	5	20	24
23	11	17	12	19	23	21	11	2	15	31	5	20	13
4	19	9	9	15	12	8	4	17	6	15	5	20	7
31	33	32	21	28	17	27	8	9	26	51	5	20	28
13	20	18	18	23	32	22	28	32	10	26	5	20	18
30	30	29	31	22	20	32	32	16	24	38	5	20	30
34	32	24	24	25	27	32	25	11	23	41	5	20	26
7	2	8	4	3	24	10	2	4	2	8	5	20	6
10	28	4	6	11	5	2	17	15	28	65	5	20	9
17	31	11	16	30	19	17	29	32	30	85	5	20	21
6	5	3	3	8	10	6	13	2	4	13	5	20	*5
28	34	26	25	32	30	28	31	22	16	22	5	20	27

Relative Standing of the Naval Cadets of the First Class

Order of annual merit.	Name	State from which appointed.	Date of admission.	Age at date of admission.	
				Years.	Months.
8	Baker, Henry Thomas.....	Ohio.....	Oct. 7, 1880	16	0
4	Chappell, Ralph Hubert.....	Michigan.....	May 22 1880	16	0
10	Cone, Hutch Ingham.....	Florida.....	Sept. 5, 1880	19	4
6	Cooper, Ignatius Taylor.....	Delaware.....	May 21, 1880	17	0
13	De Lany, Edwin Hayden.....	Tennessee.....	May 21, 1880	19	0
7	Hipps, Alfred Walton.....	Alabama.....	Sept. 6, 1880	16	0
1	Hudgins, John Melton.....	Virginia.....	Sept. 8, 1880	16	0
5	James, Leland Frierson.....	South Carolina.....	Sept. 9 1880	17	0
9	Lyon, Frank.....	Kentucky.....	May 20 1880	16	0
2	McMorris, Boling Kavanaugh.....	Alabama.....	Sept. 15, 1880	16	0
3	Moody, Roscoe Charles.....	Maine.....	Sept. 8, 1880	17	0
12	Reeves, Joseph Mason.....	Illinois.....	Sept. 8, 1880	17	0
11	Winship, Emory.....	Georgia.....	June 3 1880	18	0

Engineer Division—13 members—Annual Examination, June, 1894.

Sea service.		Order of merit in—										Number of demerits.	Order of annual merit.
Months.	Days.	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physic.	Physiology and hygiene.	Disciplin.			
12	23	5	8	8	6	8	9	12	11	5	50	8	
12	23	4	9	8	8	2	13	3	5	1	14	4	
12	23	10	10	6	6	9	7	9	8	11	125	10	
12	23	8	2	7	10	5	6	7	9	8	70	6	
12	23	13	13	12	13	12	10	11	12	13	164	13	
12	23	1	4	2	2	13	2	10	9	12	162	7	
12	23	5	1	1	1	1	1	2	13	3	50	1	
12	23	2	7	4	9	3	4	4	2	7	67	5	
12	23	9	5	10	5	11	5	5	3	9	107	9	
12	23	3	2	3	4	6	3	6	3	2	35	2	
12	23	7	6	5	3	6	7	1	1	4	47	3	
12	23	11	12	11	11	10	11	8	7	10	119	12	
12	23	12	11	13	12	4	11	13	6	6	61	11	

Relative Standing of the Naval Cadets of the ~

Order of general merit.

	Name.	State from which appointed.	Date admission.
37	Bagley, Worth	North Carolina	Sept 1
4	Baldwin, Frank Pardee	New Jersey	Sept 1
8	Bannon, Phillip Michael	Maryland	May 1
40	Barnes, Cassius Bartlett	Oklahoma	Sept 1
20	Bennett, Kenneth Maratt	New Jersey	Sept 1
36	Breckinridge, Joseph Cabell	Kentucky	Sept 1
3	Brumby, Frank Hardman	Georgia	Sept 1
13	Butler, Henry Varnum, jr	New York	Sept 1
10	Chester, Arthur Tremaine	At large	May 1
9	Cushman, William Reynolds	New York	Sept 1
12	Davidson, William Christopher	South Dakota	Sept 1
23	Dennett, Stanley Pullen	Maine	Sept 1
25	Dick, Thomas Murritt	South Carolina	Sept 1
42	Dunn, Edward Howard	Connecticut	Sept 1
29	Eckhardt, Ernst Frederick	Wisconsin	Sept 1
20	Freeman, Frederic Newton	Indiana	Sept 1
41	Garrison, Daniel Merston	New Jersey	Sept 1
21	Gherardi, Walter Rockwell	At large	Sept 1
12	Grossbeck, William Gerard	Ohio	Sept 1
27	Hall, Newt Hamill	Texas	Sept 1
35	Izard, Walter Blake	North Carolina	Sept 1
31	Johnston, Rufus Zenas, jr	North Carolina	Sept 1
46	Karno, Franklin D	Ohio	Sept 1
18	Klemann, John Valentine	New York	Sept 1
31	Knepper, Orlo Smith	Pennsylvania	Sept 1
7	Laing, Harris	Illinois	May 1
28	McCormack, Michael James	Michigan	Sept 1
26	Mallory, Charles King	Tennessee	Sept 1
41	Mann, George Hiram	Pennsylvania	Sept 1
41	Mansfield, Newton	Ohio	Sept 1
44	Marshall, John Francis, jr	Texas	Sept 1
43	Merritt, Darwin Robert	Iowa	Sept 1
17	Monaghan, John Robert	Washington	Sept 1
22	Morton, James Proctor	Missouri	Sept 1
22	Raby, James Joseph	Michigan	Sept 1
29	Sayers, Joseph Draper, jr	New York	Sept 1
1	Smith, Stuart Farrar	Pennsylvania	Sept 1
1	Stanley, William Harry	California	Sept 1
1	Takasaki, Motoboku	Empire of Japan	May 1
27	Tselt, David Womster	California	Sept 1
17	Vestal, Samuel Curtis	Indiana	May 1
19	Wadsworth, Alphon James	New York	Sept 1
29	Wacker, Charles Henry	Massachusetts	Sept 1
24	Wacker, James Edgar	North Carolina	Sept 1
34	Watson, Edward Howe	Kentucky	Sept 1
17	W. Yates, Harry Craig	Mississippi	Sept 1

b Present continued with his class

Class—46 members—Annual Examination, June, 1894.

Age at date of admission.		Order of merit in—										Number of demerits.	Order of general merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Discipline.			
17	5	33	39	40	42	33	43	3	33	35	91	37	
17	11	3	2	3	13	18	2	16	4	21	49	4	
19	2	11	19	15	8	7	9	21	22	5	20	8	
19	8	40	23	27	31	27	24	25	32	44	159	40	
16	9	21	10	25	38	24	9	13	35	23	39	20	
19	6	41	16	36	25	19	27	9	45	39	123	36	
16	11	19	3	18	38	3	6	5	27	3	11	3	
17	6	5	26	10	34	14	21	33	17	7	25	13	
15	9	17	19	11	38	5	17	43	3	11	31	10	
16	4	26	24	6	20	4	14	27	7	30	59	9	
19	2	14	22	9	4	15	12	8	19	26	57	12	
18	2	29	32	30	22	15	32	22	31	14	38	23	
18	5	15	6	4	13	9	7	11	15	7	25	e 5	
18	5	35	43	44	25	38	39	35	46	38	115	e 42	
18	9	43	45	41	28	13	33	42	13	41	154	e 39	
15	9	31	34	16	31	36	38	40	27	31	56	e 30	
17	1	11	14	14	20	15	7	41	7	23	52	e 14	
16	1	6	16	22	45	30	31	6	11	13	41	21	
17	0	2	4	2	41	2	3	2	4	36	79	e 2	
18	8	36	30	29	46	25	24	27	37	18	45	27	
18	3	25	42	45	8	43	37	34	34	16	33	35	
17	2	26	15	26	30	41	41	37	23	33	82	33	
17	9	17	7	21	17	23	16	16	14	14	32	e 16	
15	10	21	32	32	43	30	27	14	24	32	47	28	
16	3	29	28	39	34	30	22	31	36	28	54	31	
17	7	3	13	8	18	10	5	29	26	7	20	7	
17	10	46	41	43	31	40	44	35	41	5	20	38	
16	1	10	11	6	29	5	4	26	20	26	47	e 3	
18	3	39	36	36	43	27	34	20	43	42	146	41	
17	11	7	19	5	2	33	17	24	1	3	27	e 11	
17	8	43	44	24	16	35	24	37	10	46	227	e 44	
19	4	42	30	33	19	38	34	45	41	40	137	e 43	
18	5	22	11	16	25	12	12	18	40	18	39	17	
17	7	31	16	18	37	20	23	14	20	43	147	e 32	
16	11	34	8	36	6	25	29	9	25	1	7	22	
16	6	36	24	34	34	20	34	30	37	18	44	29	
16	10	1	1	1	10	1	1	1	2	2	21	e 1	
18	8	11	37	18	5	20	11	39	29	16	37	18	
17	9	45	46	46	12	46	46	46	6	23	43	6	
17	2	8	9	27	23	36	29	3	18	34	81	25	
18	1	16	5	23	11	11	14	22	44	12	37	15	
16	4	20	27	11	7	29	19	32	9	21	66	19	
17	10	28	38	31	1	43	45	44	12	7	10	e 28	
17	0	9	29	13	3	8	20	11	16	45	201	24	
17	6	28	39	42	13	42	39	7	30	28	61	34	
16	7	38	35	34	23	45	41	18	37	37	96	:	

Relative Standing of the Naval Cadets of the U. S. N. S.

Order of annual merit.

	Name.	State from which appointed	Date admission.
8	Blaset, Henry Overstreet.....	Maryland	Sept. 6
9	Blandy, Edwin Channey.....	Pennsylvania	May 19
43	Bronson, Amos, jr.....	Nebraska.....	Sept. 3
7	Bryant, John Jay, jr.....	Illinois.....	May 3
34	Burt, Charles Perry.....	Georgia.....	Sept. 6
33	Castleman, Kenneth Galleher.....	Kentucky	Sept. 6
11	Cluverius, Wat Tyler, jr.....	Louisiana	May 2
1	Cooke, Robert Powell Page.....	Virginia.....	Sept. 16
7	Craven, Thomas Tingey.....	New Hampshire.....	Sept. 19
42	Crenshaw, Arthur.....	Alabama.....	Sept. 6
37	Curtin, Roland Irvin.....	Pennsylvania.....	Sept. 6
41	Deane, Russell Andrews.....	New York.....	May 20
44	Doak, Henry Melville, jr.....	Tennessee.....	Sept. 18
5	Earle, Ralph.....	Massachusetts.....	Sept. 6
23	Ellis, Mark Saint Clair.....	Arkansas.....	July 1
18	Fitzgerald, Edward Thomas.....	Texas.....	Sept. 1
12	Gilpin, Charles Edward.....	Michigan.....	Sept. 6
36	Haucenstein, George Jacob.....	Mississippi.....	Sept. 6
40	Henry, James Buchanan, jr.....	New York.....	Sept. 6
4	Holden, Jonas Hannibal.....	Vermont.....	May 20
32	Jeanop, Earl Percy.....	West Virginia.....	Sept. 6
13	Jones, Junius Henry.....	Virginia.....	Sept. 18
10	Kalbach, Andrew Edwin.....	Pennsylvania.....	July 1
24	Kearney, Thomas Albert.....	Missouri.....	Sept. 6
16	Kimball, Henry Swift.....	Massachusetts.....	Sept. 6
23	Knox, Dudley Wright.....	Tennessee.....	Sept. 6
7	Leiper, Charles Lewis.....	Pennsylvania.....	Sept. 6
9	Lincoln, Gatewood Sanders.....	Missouri.....	May 20
1	Littlefield, William Lord.....	Massachusetts.....	Sept. 20
7	Love, James Monroe, jr.....	Virginia.....	May 20
38	MacArthur, Arthur jr.....	Wisconsin.....	Sept. 6
28	McCauley, Edward jr.....	New York.....	Oct. 10
31	McConnell, Richard Gray.....	Pennsylvania.....	May 2
27	Marshall, Albert Ware.....	Texas.....	Sept. 6
19	Middleton, George Ford.....	South Carolina.....	Sept. 6
25	Mustin, Henry Crook.....	Tennessee.....	Sept. 6
14	Palmer, Leigh Castle.....	Missouri.....	Sept. 6
3	Poor, Charles Longstreet.....	New York.....	Sept. 6
25	Rice, George Benjamin.....	Kentucky.....	Sept. 6
20	Riegels, Frank Eugene.....	At Large.....	Sept. 6
31	Robinson, Richard Hallett.....	Ohio.....	Sept. 6
40	Ross, John Hubley.....	New York.....	Sept. 6

Class—51 members—Annual Examination, June, 1894.

Age at date of admission.		Order of merit in—							
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Number of demerits.	Order of annual merit.
19	10	5	4	9	5	16	27	105	8
18	8	45	35	27	36	44	34	112	39
16	0	25	38	40	38	50	51	259	43
16	5	50	51	47	51	41	47	241	§ r
17	2	33	35	42	25	26	27	95	34
16	5	40	5	33	22	20	46	234	33
17	4	13	9	3	13	35	21	86	11
17	10	41	48	35	18	49	42	182	†
19	2	6	16	13	14	3	10	79	7
17	6	37	45	45	46	47	34	130	42
18	3	28	43	29	43	24	38	148	37
18	0	47	23	30	40	51	36	151	41
17	3	46	38	37	47	45	50	245	44
18	4	3	13	9	9	9	33	99	5
19	3	23	14	25	10	28	31	87	23
17	11	18	22	18	24	14	9	40	18
19	9	20	19	51	1	8	17	77	12
16	11	41	37	32	37	31	22	83	36
16	8	37	38	38	31	32	49	223	40
19	1	9	7	11	20	2	1	38	4
19	0	35	23	22	23	40	11	74	32
18	2	4	12	28	44	27	6	36	13
19	10	8	7	12	14	33	23	90	10
17	6	25	30	17	28	15	14	79	24
18	7	14	23	26	16	16	26	136	16
15	2	27	29	33	42	10	8	52	25
16	6	10	2	7	3	5	17	83	2
16	9	6	6	2	8	33	23	103	9
18	9	48	34	31	44	5	43	183	†
16	3	41	47	48	49	46	47	228	§ r
16	3	23	33	19	28	23	4	38	22
17	1	34	42	49	21	22	2	40	28
19	11	41	27	22	33	24	27	103	31
18	5	28	18	41	31	20	14	88	27
17	7	17	15	5	6	36	32	96	15
18	7	36	31	44	34	1	44	210	29
19	7	22	44	8	10	5	6	63	14
18	11	10	3	6	2	13	11	73	3
19	4	16	38	33	27	43	40	165	35
17	2	30	21	16	12	19	23	120	20
17	5	1	1	1	4	4	5	52	*1
15	4	37	32	20	17	29	37	173	30

Relative Standing of the Naval Cadets of the First

Order of annual merit.	Name.	State from which appointed	Date of admission.
44	Tausig, Paul Edward	At large	Sept. 6 1892
19	Tozer, Charles Maxson	New York	Sept. 19 1892
1	Volkmar, Walter Schuyler	Pennsylvania	Sept. 6 1892
6	Walker, Ralph Eric	Indiana	May 20, 1892
28	Washington, Pope	North Carolina	Sept. 7 1892
17	Wettengel, Ivan Cyrus	Colorado	Sept. 6 1892
57	Wiley, Walter Aquila	Ohio	Sept. 6 1892
26	Wood, Duncan Mahon	Alabama	Sept. 20 1892
21	Wurtsbaugh, Daniel Wilbert	Texas	May 20, 1892

44 Died July 23, 1894, at the navy yard New York

Class—51 members—Annual Examination, June, 1894—Continued.

Age at date of admission.		Order of merit in—							
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Number of demerits.	Order of annual merit.
17	9	32	49	50	47	30	14	76	dd
16	2	12	17	13	26	34	27	102	19
18	3	49	45	42	39	10	17	114	†
15	8	2	11	15	0	18	13	73	6
19	11	31	26	38	35	41	39	160	38
16	3	21	10	3	10	38	20	95	17
19	10	51	50	36	50	48	45	191	§ r
15	11	19	19	24	40	12	41	172	26
19	3	15	27	20	30	37	3	26	21

while attached to the U. S. practice-ship *Bancroft*.

Relative Standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed.	Date of admission.
	Anding, Sheldon Webb.....	Mississippi.....	May 19 1888
43	Anderson, William Christian	New York.....	Sept. 23 1888
39	Bagby, Robert Coleman.....	Missouri.....	Sept. 22 1888
31	Boyd, David French, Jr.....	Alabama.....	May 19 1888
2	Brockway, Benjamin Little.....	South Carolina.....	Sept. 6 1888
2	Brown, George, Jr.....	At large.....	Sept. 6 1888
1	Bryant, Samuel Woods.....	Pennsylvania.....	May 19 1888
23	Chase, Gilbert.....	Virginia.....	Sept. 6 1888
17	Collins, Henry Lafayette.....	Pennsylvania.....	Sept. 6 1888
24	Day, John Arthur.....	New York.....	May 19 1888
1	Du Bose, William Gunnell.....	Georgia.....	Sept. 6 1888
41	Duncan, Oscar Dibble.....	Alabama.....	Sept. 6 1888
13	Eggert, Ernest Frederick.....	Michigan.....	Sept. 6 1888
44	Falconer, Walter Maxwell.....	Ohio.....	Sept. 6 1888
1	Giles, William Pinkney.....	Texas.....	May 20 1888
16	Graeme, Joseph Wright.....	Pennsylvania.....	Sept. 6 1888
51	Graham, Andrew Thomas.....	Illinois.....	Sept. 6 1888
7	Green, Grant.....	Michigan.....	May 19 1888
42	Hart, Thomas Charles.....	Michigan.....	May 19 1888
48	Henderson, Robert William.....	Ohio.....	Sept. 22 1888
1	Hepburn, Arthur Japy.....	Pennsylvania.....	Sept. 22 1888
15	Herndon, Henry Raymond.....	Texas.....	May 19 1888
50	Hilteary, John Francis.....	Maryland.....	Sept. 6 1888
10	Holman, Frederic Ralph.....	Iowa.....	May 19 1888
30	Hoopes, Edward Trimble.....	Pennsylvania.....	Sept. 6 1888
9	Houston, Victor Stuart.....	South Dakota.....	Sept. 22 1888
12	Jeffers, William Nicholson.....	At large.....	May 19 1888
57	Jensen, Henry Norman.....	Wisconsin.....	Sept. 6 1888
8	Jones, Newham Lee.....	Mississippi.....	Sept. 6 1888
21	Kautz, Austin.....	Washington.....	May 19 1888
11	Keenan, Ernest Clinton.....	New York.....	Sept. 6 1888
1	Kempff, Clarence Selby.....	California.....	May 19 1888
12	Landis, Irwin Franklin.....	Kansas.....	Sept. 6 1888
25	Leahy, William Daniel.....	Wisconsin.....	May 19 1888
12	Lentze, Trevor William.....	At large.....	May 19 1888
26	McCarthy, Albert Henry.....	Iowa.....	Sept. 6 1888
17	McDougal, Douglas Cassell.....	California.....	May 19 1888
9	McDowell, Willis.....	Pennsylvania.....	May 19 1888
51	McMillen, Stanley Hastings.....	Indiana.....	May 19 1888
54	Magill, Samuel George, Jr.....	North Dakota.....	May 19 1888
7	McInty, Daniel Sullivan.....	Michigan.....	Sept. 6 1888
1	Mayo, Henry Wison.....	Virginia.....	May 19 1888
1	Miller, Cyrus Robinson.....	California.....	Sept. 6 1888

Class—77 members—Annual Examination, June, 1894.

Age at date of admission.		Order of merit in—				Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.		
19	6	49	74	66	29	41	†
18	0	53	47	30	57	84	43
16	11	57	18	8	33	39	19
16	8	11	14	20	74	283	31
18	9	(a)	(a)	(a)	(a)	28	s
18	1	(a)	(a)	(a)	(a)	28	s
15	11	69	52	35	61	95	†
19	11	37	23	17	22	30	23
16	9	4	37	32	45	67	17
17	8	17	42	5	72	201	24
16	11	1	1	2	1	0	1
19	1	29	37	02	14	46	41
17	3	13	13	18	48	30	13
17	8	35	34	42	66	161	44
18	1	52	58	73	8	12	†
18	0	46	6	14	18	28	16
19	0	50	60	02	11	12	53
19	9	66	58	50	14	44	†
15	11	40	50	39	52	56	42
16	5	53	39	57	40	53	48
15	11	7	11	6	40	64	3
17	4	25	9	23	40	52	15
19	9	37	57	54	52	50	50
19	2	30	16	19	33	50	18
17	9	2	68	45	65	142	35
17	2	34	44	1	10	28	9
16	1	66	44	4	67	188	†
17	7	61	47	67	14	25	57
18	9	30	9	6	26	26	8
19	8	22	40	12	33	70	21
17	8	24	29	44	26	36	33
18	11	69	56	61	33	31	†
18	2	14	28	40	49	37	32
18	0	57	52	54	60	78	55
15	7	a	a	a	a	63	Pr
17	8	45	55	65	56	56	56
17	1	69	73	68	64	102	†
18	3	33	35	50	18	45	39
19	11	57	63	47	20	47	51
17	9	60	65	45	59	78	54
19	8	8	5	16	52	61	7
16	7	63	65	52	73	272	60
18	11	14	19	10	29	50	12

Relative Standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed.	Date of admission.
1	Morse, John Wise.....	Massachusetts.....	Sept. 6 1881
25	Mutlin, Orin Gould.....	Ohio.....	Sept. 6 1881
37	Naylor, Charles Jacob.....	Pennsylvania.....	Sept. 6 1881
57	Ogleby, Richard James, Jr.....	At large.....	May 19 1881
20	Overstreet, Luther Martin.....	Nebraska.....	Sept. 6 1881
20	Owen, Alfred Crosby.....	District of Columbia.....	Sept. 6 1881
35	Owens, Charles Truesdale.....	Pennsylvania.....	Sept. 6 1881
1	Pattison, Dilly Nelson.....	Iowa.....	Sept. 6 1881
53	Perrill, Marlan Page.....	Indiana.....	Sept. 6 1881
56	Powell, Joseph Wright.....	New York.....	May 19 1881
28	Pratt, Peter Lloyd.....	Illinois.....	May 19 1881
10	Preasey, Alfred Warren.....	Nebraska.....	May 19 1881
22	Reynolds, William Herbert.....	Georgia.....	Sept. 6 1881
38	Richardson, Louis Clark.....	South Carolina.....	Sept. 6 1881
34	Rochle, Clifton Charles.....	Maryland.....	Sept. 6 1881
11	Sargent, Leonard Rudlett.....	Minnesota.....	Sept. 6 1881
40	Sexton, Walton Roswell.....	Illinois.....	May 19 1881
52	Sheffield, Fletcher Lamar.....	Georgia.....	Sept. 6 1881
52	Shelton, Nathan Jordan.....	Nebraska.....	Sept. 6 1881
46	Smith, Arthur St. Clair, Jr.....	Iowa.....	Sept. 6 1881
47	Sykes, Eugene Octave, Jr.....	Mississippi.....	May 19 1881
57	Tarrant, William Theodore.....	Texas.....	Sept. 6 1881
57	Taylor, Hugh Kirkpatrick.....	Ohio.....	Sept. 6 1881
57	Terry, Joseph Dantrudge.....	Virginia.....	May 19 1881
14	Thelen, David Elias.....	Wisconsin.....	Sept. 6 1881
29	Van Orden, George.....	Michigan.....	May 19 1881
49	Ward, Joshua Thomason.....	Texas.....	May 19 1881
45	Webber, George.....	Arkansas.....	Sept. 6 1881
57	Wells, Horace Taylor.....	Missouri.....	Sept. 6 1881
57	Wessels, Arthur Lewis.....	Iowa.....	May 19 1881
26	White, William Russell.....	Arizona.....	Sept. 6 1881
29	Wilbanks, Henry.....	Indiana.....	Sept. 6 1881
57	Williams, Yancy Sullivan.....	South Carolina.....	Sept. 6 1881
56	Yarnall, Harry Edwin.....	Iowa.....	Sept. 6 1881

Class—77 members—Annual Examination, June, 1894—Continued.

Age at date of admission.		Order of merit in—				Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.		
18	3	65	31	11	40	19	†
17	4	16	22	42	7	10	25
17	11	55	47	27	22	60	37
17	7	72	68	31	29	37	† r
19	10	12	36	54	4	12	30
18	0	25	23	19	40	56	20
15	3	36	19	40	62	64	35
17	7	64	71	70	51	48	†
18	9	3	3	21	22	34	*5
16	3	4	6	26	3	16	*6
18	5	25	23	13	69	211	28
19	11	19	15	9	13	27	10
19	4	25	16	28	33	60	22
18	10	18	31	62	45	19	38
16	0	41	33	34	26	51	34
17	1	19	3	25	45	51	11
16	8	37	30	48	33	46	40
17	6	6	8	3	4	16	*2
19	11	62	70	32	57	81	52
19	8	44	40	59	20	27	46
16	10	50	41	38	63	102	47
15	1	74	51		40	44	§ r
18	6	73	67	71	14	24	§ r
19	3	43	27	23	8	27	27
17	10	10	12	36	22	32	14
15	1	42	64	52	69	173	59
19	5	47	60	60	2	20	49
16	4	47	42	41	29	32	45
16	10	55	60	69	11	15	§ r
19	10	30	54	58	71	225	57
17	3	21	19	14	68	185	26
18	3	23	26	36	33	47	29
17	5	68	72	71	52	34	§ r
17	10	9	2	21	6	12	*4

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

October 16, 1893, to October 4, 1894.

APPOINTED ENSIGNS JULY 1, 1894.

Naval Cadet Campbell, Joseph Randolph	Class of 1894
Naval Cadet Day, George Calvin	Class of 1894
Naval Cadet Evans, Holden A	Class of 1894
Naval Cadet McNamee, Luke	Class of 1894
Naval Cadet Sawyer, Frederick Lewis	Class of 1894
Naval Cadet Hussey, Charles Lincoln	Class of 1894
Naval Cadet Blakely, John Russell Young	Class of 1894
Naval Cadet Jewell, Charles Theodore	Class of 1894
Naval Cadet Davison, Gregory Caldwell	Class of 1894
Naval Cadet Thompson, Leon Seymour	Class of 1894
Naval Cadet Traut, Frederick Augustus	Class of 1894
Naval Cadet Hines, John Fore	Class of 1894
Naval Cadet Payne, Fred Rounselle	Class of 1894
Naval Cadet Symington, Powers	Class of 1894
Naval Cadet Stirling, Yates, jr.	Class of 1894
Naval Cadet Mallison, George	Class of 1894
Naval Cadet Pringle, Joel Robert Poinsett	Class of 1894
Naval Cadet McCormick, Benjamin Bernard	Class of 1894

APPOINTED ASSISTANT ENGINEERS JULY 1, 1894.

Naval Cadet Porter, John Singleton	Class of 1894
Naval Cadet Crank, Robert Kyle	Class of 1894
Naval Cadet Moses, Stanford Elwood	Class of 1894
Naval Cadet Hasbrouck, Raymond De Lauey	Class of 1894

APPOINTED ASSISTANT NAVAL CONSTRUCTORS JULY 1, 1894

Naval Cadet Bueret, John Dougall	Class of 1894
Naval Cadet McDonald, Joseph Ezekiel	Class of 1894
Naval Cadet Ferguson, Homer Lenoir	Class of 1894

APPOINTED SECOND LIEUTENANTS U. S. MARINE CORPS, JULY 1, 1894

Naval Cadet Dawson, William Charles	Class of 1894
Naval Cadet Low, Theodore Henry	Class of 1894
Naval Cadet Ball, Walter	Class of 1894
Naval Cadet Davis, Austin Rockwell	Class of 1894
Naval Cadet Russell, John Henry, jr.	Class of 1894
Naval Cadet Macklin, Charles Featus	Class of 1894
Naval Cadet Borden, Thomas Sheppard	Class of 1894

HONORABLY DISCHARGED JUNE 30, 1894.

Naval Cadet Gamble, Aaron L.....	Class of 1892
Naval Cadet Mather, George H.....	Class of 1892
Naval Cadet Stitt, Thomas L.....	Class of 1892
Naval Cadet Myers, John T.....	Class of 1892
Naval Cadet Kellogg, Edward S.....	Class of 1892
Naval Cadet Allen, David V.....	Class of 1892

RESIGNED.

Naval Cadet Shea, Patrick F., third class	Oct. 19, 1893
Naval Cadet Enbody, Josiah W., fourth class	Jan. 27, 1894
Naval Cadet Martin, Nathaniel M., second class.....	Feb. 1, 1894
Naval Cadet Mitchell, Mason E., third class.....	Feb. 6, 1894
Naval Cadet Hunter, Charles M., fourth class	Feb. 5, 1894
Naval Cadet Tottenham, Josiah W., fourth class	Feb. 6, 1894
Naval Cadet Buford, Charles S., fourth class.....	Feb. 7, 1894
Naval Cadet Eskridge, Oliver S., fourth class.....	Feb. 7, 1894
Naval Cadet Hord, Oliver S., fourth class.....	Feb. 7, 1894
Naval Cadet Peters, Francis M., fourth class.....	Feb. 7, 1894
Naval Cadet Robinson, William A., fourth class	Feb. 7, 1894
Naval Cadet Tonkin, John B., fourth class	Feb. 7, 1894
Naval Cadet Wells, William B., fourth class.....	Feb. 7, 1894
Naval Cadet Woods, Edward, second class.....	Feb. 7, 1894
Naval Cadet Morris, Bennie, fourth class	Feb. 7, 1894
Naval Cadet Watson, Henry W., fourth class	Feb. 7, 1894
Naval Cadet Rutledge, Carl Clyde, fourth class.....	Mar. 27, 1894
Naval Cadet Buttrick, James T., fourth class	April 4, 1894
Naval Cadet Kress, James C., fourth class	May 18, 1894
Naval Cadet Bryant, John Jay, third class.....	June 13, 1894
Naval Cadet Love, James M., jr., third class	June 13, 1894
Naval Cadet Wiley, Walter A., third class.....	June 13, 1894
Naval Cadet Tarrant, William T., fourth class.....	June 14, 1894
Naval Cadet Taylor, Hugh K., fourth class	June 14, 1894
Naval Cadet Williams, Yancey S., fourth class.....	June 14, 1894
Naval Cadet McDougal, Douglas C., fourth class.....	June 16, 1894
Naval Cadet Leutze, Trevor W., fourth class.....	Sept. 10, 1894
Naval Cadet Oglesby, Richard J., jr., fourth class	Oct. 1, 1894
Naval Cadet Jeffers, William N., fourth class	Oct. 3, 1894
Naval Cadet Williams, Harry C., second class	Oct. 3, 1894
Naval Cadet Green, Grant, fourth class	Oct. 3, 1894
Naval Cadet Falk, Julius P., fourth class.....	Oct. 3, 1894

DROPPED.

Naval Cadet Olsen, Mack H., third class.....	Mar. 10, 1894
Naval Cadet Spitzer, Max, third class	Mar. 10, 1894

DEATHS.

Naval Cadet Taussig, Paul E., second class	July 23, 1894
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MERIT-ROLLS FOR 1893-'94.

Merit rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 88, showing the relative weights of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets that take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one half of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent of the multiple in any year shall be distinguished by a star affixed to their names on the merit rolls." (*Regulations U. S. Naval Academy*, § 17.)

The diplomas of cadets whose final marks on the graduating merit roll are not less than 85 per cent of the maximum read "passed with distinction;" those whose final marks are between 74 per cent and 85 per cent of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent and 74 per cent of the maximum read "passed."

1' Physically disqualified for the naval service.

• Received 85 per cent of the multiple.

† Found deficient, allowed a re-examination, passed, and continued with class.

‡ Found deficient, allowed a re-examination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

b Deficient.

d Dismissed.

e Selected for engineer division.

f Honorably discharged at end of four years' course.

r Resigned.

s Sick, continued with next class.

Merit-roll of the Naval Cadets of the Graduating Class at the conclusion of the Six Years' Course, June, 1894—Continued.

LANE DIVISION—31 MEMBERS—Continued.

Order of merit.	Name.	Examinations.											Final aggregate.	Aggregate for four years.	Aggregate for final examination.	Navigation notes, books, journals, and station bills.	Cruise reports.	French, Spanish and German.	International law.	Steam machinery and boiler engineering.	Navigation and surveying.	Ordnance and gunnery.	Seamanship and naval construction.	Name.	Assignment.
		26	44	44	44	20	24	24	24	16	8	240														760	1,000
21	Joel R. P. Pringle.	42.28	32.12	31.57	7.80	19.26	24.29	14.12	5.45	178.90	552.90	729.80	Ensign.												
22	Irving R. McCormick.	41.30	31.24	31.90	11.20	21.12	22.12	12.08	6.24	178.80	548.70	727.50	Ensign.												
23	Austin R. Davis.	40.60	29.16	33.48	14.55	17.76	21.00	14.08	6.14	167.17	539.48	726.65	Second Lieutenant, U. S. M. C.												
24	John H. Russell, Jr.	39.34	28.28	30.09	10.30	17.94	17.57	14.40	7.00	175.53	544.72	720.24	Second Lieutenant, U. S. M. C.												
25	George H. Mather.	42.14	27.50	29.92	11.50	18.98	19.74	12.56	5.28	167.58	532.55	720.13	Honorably discharged.*												
26	Charles F. Macklin.	44.26	35.42	32.56	9.60	19.14	14.84	15.52	6.40	177.86	541.70	719.56	Second Lieutenant, U. S. M. C.												
27	Thomas L. Stitt.	34.61	29.26	27.50	8.95	14.24	20.02	12.44	5.54	161.50	537.56	719.15	Honorably discharged.*												
28	Thomas S. Hurten.	38.78	29.48	27.70	10.75	17.94	24.36	11.84	5.54	166.19	532.31	718.50	Second Lieutenant, U. S. M. C.												
29	John T. Myers.	44.34	31.35	29.27	8.20	18.24	20.76	12.92	5.98	169.78	545.44	715.22	Honorably discharged.												
30	Edward S. Kellogg.	39.29	27.61	27.50	10.45	18.66	17.50	13.20	6.24	160.46	540.68	701.14	Honorably discharged.												
31	David Van H. Allen.	39.20	26.85	31.35	13.75	19.14	17.92	11.28	6.10	175.50	521.77	697.36	Honorably discharged.												

* At his own request.

NOTE.—Naval Cadets Joseph K. McDonald and Homer I. Ferguson appointed assistant naval constructors did not appear at the final graduating examination.

ENGINEER DIVISION—4 MEMBERS.

Order of merit.	NAME.	Seamanship and naval construc- tion.	Marine engines.	Designing machin- ery.	Boilers.	French, Spanish, and German.	Cruise reports.	Journals and sta- tion bills.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.	ASSIGNMENT.
		32	72	36	40	28	16	16	240	760	1,000	
1	John S. Porter.....	26.00	66.78	32.85	35.10	21.14	12.44	16.00	210.31	623.16	833.47	Assistant Engineer.
2	Robert K. Crank.....	23.04	58.08	29.25	33.10	22.26	11.60	14.56	192.49	553.26	745.75	Assistant Engineer.
3	Stanford E. Moses.....	22.88	58.14	25.11	28.10	24.43	14.72	16.00	181.38	553.05	742.43	Assistant Engineer.
4	Raymond DeL. Hasbrouck.....	24.16	61.92	31.05	32.70	18.76	14.08	14.16	197.43	539.29	736.72	Assistant Engineer.

NOTE.—Naval Cadet John D. Bueret, appointed assistant naval constructor, did not appear at the final graduating examination.

Merit-roll, for the four years ending June, 1893, of the Naval Cadets of the Class appointed in 1889, now performing required service afloat—Line Division—28 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	Aggregate for four years.
	Maxima	76	152	228	304	560
1	Wilfrid Van N. Powelson	66.49	138.83	201.36	272.63	679.28
2	William S. Montgomery	62.48	139.19	199.56	273.60	674.83
3	Edwin A. Elder	67.70	136.73	196.88	255.70	657.01
4	Frank H. Clark, jr.	65.06	133.25	180.01	252.72	631.04
5	Claude E. Fitch	61.76	133.56	188.95	246.92	631.19
6	Henry H. Ward	66.56	126.93	189.35	246.89	633.73
7	Joseph A. Perry	52.70	124.64	186.50	257.99	621.83
8	Eugene L. Bisset	70.16	130.93	179.88	249.67	630.64
9	Walter S. Crosley	61.40	127.85	181.06	243.42	613.73
10	Charles J. Lang	62.95	128.86	180.87	238.04	610.72
11	Edward H. Campbell	60.08	126.23	176.76	244.79	607.86
12	Louie J. Magill	66.76	136.35	173.24	227.54	594.89
13	Thomas D. Parker	67.90	127.48	173.96	233.67	593.01
14	David M. Berry	56.67	120.68	178.30	244.42	599.07
15	Thomas S. Wilson	58.81	121.78	174.99	239.40	594.98
16	John S. Doldridge	60.25	126.45	173.14	236.91	596.75
17	Henry A. Pearson	53.20	118.80	174.50	238.16	584.66
18	William K. Gise	60.71	124.26	171.80	238.69	595.46
19	Allen M. Cook	59.82	125.35	169.44	227.95	582.56
20	Frank L. Chadwick	60.16	118.75	166.32	232.75	578.00
21	Christopher C. Fewel	52.41	114.11	172.71	236.72	575.95
22	Percy N. Olmsted	59.38	115.50	168.70	231.94	575.52
23	Orton P. Jackson	59.10	123.26	165.17	227.40	574.93
24	Peter C. Hains, jr.	57.59	119.88	175.82	217.81	571.10
25	William G. Powell	63.21	116.64	169.46	239.52	568.83
26	Richard S. Douglas	57.25	114.26	170.61	246.99	589.11
27	Frank B. Upham	55.93	120.48	168.02	222.84	567.27
28	John L. Sticht	54.74	114.19	168.58	223.42	560.93
29	John P. J. Ryan	61.69	120.81	167.61	211.16	561.27
30	John R. Morris	55.91	120.27	170.59	211.56	558.33
31	Chester Wells	56.39	121.35	164.41	211.84	553.99
32	Gerald L. Holdinger	54.93	112.41	161.48	222.17	550.99
33	Alfred A. McKethan	54.40	113.14	162.24	220.70	550.48
34	Emmett R. Pollock	60.42	115.49	160.22	211.17	547.30
35	James B. Potter	51.80	108.34	159.67	223.28	543.09
36	Alfred A. Pratt	51.28	109.49	162.96	217.75	541.48
37	Marvin Carter	52.29	112.80	161.79	208.00	534.88
38	Andre M. Procter	55.74	108.79	155.76	196.50	516.79

Merit-roll, for the four years ending June, 1893, of the Naval Cadets of the Class appointed in 1889, now performing required service afloat—Engineer Division—6 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima	76	152	228	304	760
*1	Daniel C. Nutting, jr.	61.39	130.34	198.79	271.01	661.53
2	Maurice B. Pougnet	66.52	129.41	184.08	232.41	612.42
3	Henry B. Price	55.09	125.18	174.04	235.07	589.38
4	Martin E. Trench	55.87	121.92	171.36	236.88	586.03
5	John R. Brady	57.68	121.18	166.04	220.32	565.22
6	Frank De W. Read	57.31	115.28	168.20	219.43	560.22

Merit-roll, for the four years ending June, 1894, of the Naval Cadets of the Class of 1890, now performing required service afloat—Line Division—31 members.

Order of general merit for four years	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	Grand total.
	Maxima.....	70	152	224	304	750
1	William P. Robert.....	69.78	141.49	201.91	277.4	689.58
2	Daniel H. Cox.....	68.79	138.06	202.4	277.75	686.99
3	Irvin Van G. Glills.....	66.37	132.75	198.18	277.45	674.75
4	Thomas G. Roberts.....	70.31	138.61	196.60	266.7	671.22
5	David F. Sellers.....	65.04	131.28	197.50	273.67	667.49
6	Lawrence S. Adams.....	59.83	129.50	194.96	262.1	646.4
7	Raymond Stone.....	60.92	132.41	184.8	256.1	634.23
8	John T. Tompkins.....	67.89	132.17	189.90	246.67	636.63
9	Ridley McLean.....	67.23	129.62	192.2	251.28	640.33
10	Charles Webster.....	63.20	125.67	183.74	251.09	623.7
11	Provoost Babbin.....	64.71	130.86	185.72	244.6	626.89
12	Winston Churchill.....	61.35	120.16	181.13	248.74	611.38
13	L. Burton Jones.....	64.37	129.30	167.20	246.48	607.35
14	Simon P. Fullinwider.....	62.72	127.42	179.17	245.18	614.49
15	Stephen V. Graham.....	63.12	124.59	169.13	247.22	604.06
16	Ernest L. Bennett.....	61.66	124.29	171.16	241.43	598.54
17	John McC. Luby.....	60.04	117.41	171.73	237.83	586.99
18	Fritz L. Sandoz.....	65.18	122.18	169.70	227.20	584.26
19	Gilbert S. Galbrnith.....	56.09	121.0	170.14	231.93	579.16
20	Melville J. Shaw.....	66.87	125.11	162.19	223.06	575.23
21	Arthur G. Kavanagh.....	62.27	118.61	173.78	217.59	572.25
22	Charles S. Bookwalter.....	57.60	113.80	169.74	229.43	570.57
23	William P. Scott.....	57.50	113.36	169.72	228.75	569.33
24	Carlton F. Snow.....	55.44	112.31	167.71	224.72	559.18
25	Robert H. Osborn.....	59.01	118.65	165.90	225.15	568.71
26	Roscoe Spear.....	61.07	119.01	161.91	220.74	562.73
27	Walter J. Manion.....	66.12	116.2	164.18	217.9	564.4
28	Robert W. McNeely.....	59.65	115.8	167.21	221.35	563.81
29	Walter S. Turpin.....	54.08	112.78	161.24	240.8	568.9
30	Roscoe C. Bulmer.....	58.09	115.0	160.52	227.20	560.81
31	William S. Whitted.....	57.31	111.02	166.56	221.87	556.76
32	George L. P. Stone.....	56.54	113.30	161.55	224.19	555.58
33	George E. Gehm.....	51.88	111.66	161.70	221.28	546.52
34	Clarence England.....	58.85	100.8	154.13	218.70	522.48

Merit-roll, for the four years ending June, 1894, of the Naval Cadets of the Class appointed in 1890, now performing required service afloat—Engineer Division—13 members.

Order of general merit.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima	76	152	228	304	760
1	John M. Hudgins	61.95	128.30	186.23	251.42	627.90
2	Boling K. McMorris	61.06	121.17	174.23	244.80	601.26
3	Alfred W. Hinds	61.50	123.08	171.57	231.99	588.14
4	Roscoe C. Moody	58.60	118.52	172.62	238.28	588.02
5	Ignatius T. Cooper	62.31	119.44	166.80	232.10	580.65
6	Henry T. Baker	57.50	122.57	168.53	231.25	579.85
7	Ralph H. Chappell	56.40	115.43	171.26	236.17	579.26
8	Leland F. James	61.15	119.63	162.45	235.48	578.71
9	Frank Lyon	56.45	111.45	166.43	228.81	563.14
10	Joseph M. Reeves	55.29	118.73	170.74	217.17	561.93
11	Hutch I. Cone	59.13	115.75	161.42	222.91	559.21
12	Emory Winship	58.84	114.78	159.00	220.70	553.41
13	Edwin H. De Lany	53.96	99.22	150.33	208.06	511.57

Merit-roll of the Naval Cadets of the First Class—Line Division—34 members—Annual Examination, June, 1894.

Order of annual merit	Name.	Subjects										Discipline	Aggregate
		Seamanship, naval construction, and naval tactics.	Seamanship, practical cruise.	(Ordnance and gunnery.)	Navigation and surveying.	Navigation, practical cruise.	Local acquaintance and applied mechanics.	Physics.	International law.	Physiology and hygiene.			
	Maxima	32	4	60	48	8	50	50	16	8	64	304	
1	William P. Robert	40 15	7 36	55 95	41 88	7 28	17 00	17 70	14 68	7 92	61 44	277 36	
2	Iris Van G. Gillis	44 31	6 84	50 25	42 00	7 36	18 55	17 50	14 08	6 76	59 68	273 45	
3	Daniel W. Cox	45 37	6 98	52 80	37 44	6 00	16 75	17 05	14 08	6 94	58 72	262 73	
4	Lawrence N. Adams	46 54	7 08	51 90	38 28	7 00	17 40	16 20	13 80	6 46	57 44	262 10	
5	Charles Webster	43 94	6 98	53 10	39 60	6 80	14 90	16 55	13 64	7 44	59 04	261 99	
6	Raymond Stone	42 51	7 32	49 80	36 40	7 10	13 35	15 65	14 44	7 28	60 64	256 53	
7	David F. Sellers	44 46	6 54	49 35	38 06	6 18	14 70	16 20	14 12	6 16	58 24	252 93	
8	Hulley McLean	41 60	6 72	52 05	37 08	6 98	15 95	16 70	14 16	7 22	52 80	251 36	
9	John T. Tompkins	42 38	6 22	52 50	37 64	6 52	16 50	17 65	13 20	6 44	51 36	250 45	
10	Thomas G. Roberts	41 60	6 82	47 70	36 26	6 18	15 90	15 35	13 00	6 44	56 80	246 79	
11	L. Barton Jones	42 51	6 46	46 95	35 52	6 80	15 10	15 40	13 56	6 90	57 28	246 48	
12	Procurat Balin	42 51	6 64	47 70	34 32	7 04	14 45	16 40	13 76	6 92	55 84	244 68	
13	William P. Scott	38 35	6 72	46 50	35 64	6 12	13 40	14 50	13 76	7 44	56 32	238 75	
14	Stephen V. Graham	40 17	6 70	44 15	36 00	6 14	14 10	15 20	13 80	5 92	51 04	237 22	
15	Winston Churchill	34 35	6 72	46 05	32 60	6 86	14 15	13 35	12 84	5 88	56 80	236 76	
16	John McCall	34 74	6 46	44 90	34 66	5 60	13 25	14 30	12 72	5 72	55 36	235 83	
17	Nelson P. Pullinwaler	39 09	6 82	45 45	32 04	5 90	14 45	15 10	13 04	5 70	57 34	235 18	
18	Carlton P. Howe	40 60	6 54	44 26	33 84	5 82	12 55	14 35	12 00	5 36	57 12	234 72	
19	Gilbert K. Galbraith	39 65	6 34	46 00	32 60	5 26	12 65	14 25	12 20	6 16	56 52	233 91	
20	Kenneth L. Bennett	40 64	7 07	45 00	34 82	6 14	13 60	15 05	13 16	5 60	56 56	231 43	
21	Walter M. Tappin	29 26	6 14	44 45	34 96	5 98	11 70	15 00	11 80	5 20	50 10	211 45	
22	Charles H. H. H. H.	18 10	6 16	6 47	1 16	6 16	1 16	1 16	1 16	5 16	16 16	1 16	
23	W. H. H. H.	18 10	6 16	6 47	1 16	6 16	1 16	1 16	1 16	5 16	16 16	1 16	

24	Fritz L. Sandos.....	37.18	6.50	41.55	31.63	6.29	13.75	13.80	14.12	6.14	56.48	227.20
25	Robert H. Osborn.....	39.00	6.44	45.75	31.56	4.80	13.30	13.50	11.36	5.20	54.24	225.16
26	George L. P. Stone.....	35.75	6.12	44.10	32.64	5.78	13.25	13.25	12.64	6.74	53.92	224.19
27	William S. Whitted.....	37.18	5.80	43.05	32.40	5.36	12.95	13.75	11.60	5.92	55.84	223.85
28	Melville J. Shaw.....	36.79	5.84	40.95	33.00	5.70	13.90	13.80	13.80	6.82	52.48	223.08
29	George E. Gelm.....	38.09	6.52	41.85	30.96	5.78	12.50	13.10	11.96	5.48	55.04	221.28
30	Roscoe Spear.....	36.92	6.16	41.70	31.44	5.96	13.65	13.25	11.48	6.42	53.76	220.74
31	Robert W. McNeely.....	38.22	6.22	42.15	32.76	5.72	12.90	14.80	13.04	6.86	47.68	220.35
32	Clarence England.....	36.66	6.76	41.25	30.84	6.20	13.60	14.20	12.88	6.00	50.40	218.75
33	Arthur G. Kavanaugh.....	37.96	6.60	43.65	31.56	6.14	14.30	14.65	12.20	5.80	44.64	217.50
34	Walter J. Manion.....	36.14	6.60	39.30	31.08	5.70	13.10	13.45	11.48	6.40	54.08	217.39

*Merit-roll of the Naval Cadets of the First Class—Engineer Division—1. members.
Annual Examination, June, 1891.*

Order of annual merit	NAME.	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Discipline.	Average.
		Maxima	32	14	40	32	20	40	20	5	64	204
1	John M. Hudgins	24.24	37.20	32.20	26.72	19.45	34.30	15.55	5.12	76.64	1.5
2	Boling K. McMorris	24.56	36.24	30.40	25.52	18.20	31.90	14.60	5.72	77.76	2.44
3	Roscoe C. Moody	21.12	35.16	29.40	25.64	18.20	28.20	15.70	6.18	75.84	2.52
4	Ralph H. Chappell	24.72	33.60	28.90	24.16	18.80	25.70	15.35	5.66	59.66	1
5	Leland F. James	24.64	34.32	29.50	23.68	18.50	29.50	15.20	6.10	54.24	1
6	Ignatius T. Cooper	23.84	36.24	29.00	21.52	18.30	28.50	14.50	5.40	72.80	1.1
7	Alfred W. Hinds	24.72	36.12	30.70	25.84	17.25	32.10	14.10	5.40	45.76	1
8	Henry T. Baker	24.24	34.08	28.90	24.24	18.10	27.00	13.75	5.16	54.88	1
9	Frank Lyon	24.44	35.76	28.50	24.80	17.45	29.60	14.70	5.72	49.44	1.1
10	Hutch L. Cone	23.28	33.24	24.50	24.24	17.95	28.20	14.20	5.40	47.64	1.1
11	Emory Winship	22.24	31.92	26.20	21.84	18.45	26.50	14.70	5.38	56.56	1.1
12	Joseph M. Reeves	22.80	31.56	26.90	23.44	17.90	26.30	14.25	5.54	48.64	1.1
13	Edwin H. De Lany	21.60	31.08	26.80	20.64	17.30	26.50	13.90	5.14	45.60	1.1

Merit-roll of the Naval Cadets of the Second Class—16 members—Annual Examination, June, 1894.

Order of merit.	NAME.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and me- chanics.	Physics and chem- istry.	French.	Mechanical draw- ing.	Discipline.	Aggregate.
1	Stuart F. Smith	10.65	10.44	29.12	10.59	43.68	35.90	10.83	11.07	43.92	206.20
2	William G. Groesbeck	10.41	9.45	28.16	9.51	43.20	33.50	10.53	10.95	39.48	195.19
3	Frank H. Brumby	9.42	9.87	23.92	9.00	41.16	31.20	10.11	9.33	43.56	188.17
4	Frank P. Baldwin	10.32	9.96	27.52	10.50	33.24	34.00	9.27	10.95	41.76	187.52
5	Thomas M. Dick	9.54	9.21	27.04	10.50	36.76	30.20	9.51	10.20	43.32	185.88
6	Charles K. Mallory	9.69	8.94	26.48	9.93	37.44	31.40	8.82	9.93	41.52	184.15
7	Harris Laning	10.32	8.91	26.24	10.26	35.04	31.50	8.64	9.48	43.32	183.45
8	Philip M. Bannon	9.60	8.61	24.40	10.71	36.60	29.90	9.06	9.84	43.44	182.16
9	William R. Cushman	8.82	8.40	26.48	10.14	37.56	29.10	8.70	10.77	41.28	181.43
10	Arthur T. Chester	9.48	8.61	25.28	9.60	37.44	28.50	7.83	11.04	43.20	180.98
11	Newton Mansfield	9.96	8.61	26.72	11.13	31.08	28.50	8.91	11.37	43.56	179.84
12	William C. Davidson	9.57	8.58	25.92	11.04	33.72	29.20	9.81	9.99	41.52	179.35
13	Henry V. Butler, jr.	10.11	8.43	25.60	9.72	34.32	28.10	8.40	10.14	43.52	178.14
14	Daniel M. Garrison	9.60	8.85	24.64	10.14	33.72	30.20	7.92	10.77	41.64	177.48
15	Samuel C. Vestal	9.51	9.36	23.52	10.56	34.80	29.10	9.00	8.19	42.72	176.76
16	Franklin D. Karns	9.48	9.18	23.76	10.41	32.76	29.00	9.27	10.23	42.48	176.57
17	John R. Monaghan	9.15	8.94	21.08	9.99	34.56	29.20	9.24	8.58	42.00	175.74
18	William H. Standley	9.60	8.13	23.92	11.01	33.00	29.70	8.10	9.30	42.36	175.21
19	Albion J. Wadhams	9.33	8.40	25.28	10.77	31.44	28.30	8.43	10.68	41.76	174.39
20	Kenneth M. Bennett	9.09	9.03	23.20	9.60	32.52	29.90	9.45	8.85	41.64	173.28
21	Walter R. Gherardi	10.02	8.73	23.60	9.21	31.32	26.80	10.18	10.47	42.60	172.83
22	James J. Raby	8.52	9.12	21.20	10.89	32.16	26.90	9.72	9.63	44.28	172.39
23	Stanley P. Dennett	8.70	8.25	22.64	10.11	33.72	26.70	9.00	9.00	42.48	170.69
24	James E. Walker	9.81	8.31	24.96	11.07	36.48	28.20	9.51	10.17	31.68	170.19
25	David W. Todd	9.84	9.00	22.80	10.08	30.84	26.90	10.26	11.02	39.96	169.70
26	Charles H. Walker	9.09	8.10	22.24	11.19	30.00	25.00	7.74	10.38	43.32	167.06
27	Newt H. Hall	8.31	8.28	22.72	8.94	32.16	27.20	8.79	8.64	42.00	167.04
28	John V. Klemm	9.27	8.25	21.68	9.33	31.32	27.00	9.42	9.75	40.32	166.34
29	Joseph D. Sayers, jr.	8.31	8.49	21.28	9.72	33.60	26.30	8.58	8.64	42.00	166.32
30	Frederic N. Freeman	8.67	8.22	24.08	9.78	30.84	25.90	8.10	9.33	41.16	166.14
31	Orlo S. Knepper	8.70	8.34	21.04	9.72	31.32	27.90	8.52	8.70	41.40	165.64
32	James P. Morton	8.67	8.73	23.92	9.66	33.00	27.60	9.42	9.93	34.68	165.61
33	Rufus Z. Johnston, jr.	8.82	8.79	22.68	9.81	30.36	25.40	8.25	9.78	40.20	164.32
34	Edward H. Watson	8.76	8.04	20.80	10.50	30.12	25.60	9.84	9.12	41.40	164.18
35	Walter B. Izard	8.85	7.92	20.08	10.71	30.90	26.20	8.34	8.88	42.36	163.34
36	Jos. C. Breckinridge	8.04	8.73	21.20	9.99	34.12	27.00	9.72	8.10	36.96	162.86
37	Worth Bagley	8.61	8.04	20.96	9.39	31.08	25.20	10.26	8.94	39.72	162.20
38	M. J. McCormack	7.62	7.98	20.56	9.78	30.48	25.10	8.28	8.55	43.44	161.79
39	Ernst F. Eckhardt	7.83	7.62	20.80	9.96	34.44	26.40	7.80	10.32	35.88	161.11
40	Cassius B. Barnes	8.07	8.55	22.80	9.78	32.04	27.20	8.85	9.00	34.44	160.73
41	George H. Mann	8.16	8.16	21.20	9.33	32.04	26.30	9.21	8.28	35.28	157.96
42	Edward H. Dunn	8.49	7.71	20.48	9.99	30.60	25.60	8.23	7.98	38.76	157.80
43	Darwin R. Merritt	7.98	8.28	21.36	10.17	30.60	26.30	7.71	8.55	36.60	157.53
44	John F. Marshall, jr.	7.83	7.68	23.44	10.47	30.96	27.20	8.25	10.65	30.48	158.96
45	Harry C. Williams	8.28	8.19	21.28	10.08	24.64	25.40	9.21	8.64	39.36	169.11
46	Motohiko Takasaki	7.77	6.45	15.76	10.53	16.68	14.60	6.60	10.89	41.64	131

b Deficient, continued with the class.

Merit-roll of the Naval Cadets of the Third Class—71 members—Annual Examinations June, 1894.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Discipline.	Grand total.
		40	20	16	20	24	22	142
* 1	Richard H. Robinson.....	37.80	17.90	14.00	18.05	22.32	19.17	148.24
2	Charles L. Leiper.....	30.60	16.00	13.24	18.20	22.02	21.11	141.17
3	Charles L. Poor.....	30.60	16.10	13.48	18.25	21.42	21.19	140.74
4	Jonas H. Holden.....	30.70	15.80	12.88	14.75	23.94	22.47	139.54
5	Ralph Earle.....	33.70	15.25	12.92	16.65	21.74	26.68	137.94
6	Ralph E. Walker.....	33.80	15.55	12.24	17.00	20.40	23.79	135.78
7	Thomas T. Craven.....	32.40	14.80	12.44	15.80	22.80	23.44	131.68
8	Henry O. Bisset.....	32.60	16.05	12.92	17.20	20.58	24.72	134.07
9	Gatewood S. Lincoln.....	32.40	15.85	13.88	16.70	17.82	26.36	137.01
10	Andrew E. Kalbach.....	31.40	15.80	12.84	15.80	18.78	25.36	130.98
11	Wat T. Cluverius, Jr.....	30.00	15.70	13.68	16.20	18.42	28.72	132.72
12	Charles E. Gilpin.....	27.80	14.30	9.84	19.50	21.98	25.44	118.66
13	Junius H. Jones.....	33.00	15.35	11.32	12.75	19.78	25.92	118.12
14	Leigh C. Palmer.....	27.50	12.00	13.20	16.55	22.02	25.92	117.19
15	George I. Middleton.....	28.90	14.95	14.00	17.00	18.30	29.68	112.83
16	Henry S. Kimball.....	29.90	14.05	11.48	15.65	20.58	29.68	111.34
17	Ivan C. Wettengel.....	27.00	15.00	11.68	16.55	17.58	28.44	116.25
18	Edward T. Fitzgerald.....	28.60	14.15	12.00	14.05	21.12	25.98	116.90
19	Charles M. Tozer.....	30.20	14.70	12.44	13.90	18.48	28.12	117.84
20	Frank E. Ridgely.....	26.40	14.25	12.16	16.20	20.16	28.58	117.75
21	Daniel W. Wurtzbaugh.....	29.80	13.90	11.76	13.55	17.94	29.56	117.51
22	Arthur MacArthur, Jr., Jr.....	27.20	13.35	11.92	13.75	19.80	29.68	115.70
23	Mark St. C. Ellis.....	27.20	15.00	11.52	15.15	19.22	28.16	116.25
24	Thomas A. Kearney.....	27.00	13.60	12.08	13.75	20.70	25.12	112.25
25	Dudley W. Knox.....	26.80	13.85	10.66	12.95	21.72	27.76	113.74
26	Duncan M. Wood.....	28.40	14.30	11.60	14.05	21.68	24.24	114.27
27	Albert W. Marshall.....	26.70	14.45	10.64	13.45	19.98	25.12	110.34
28	Edward McCauley, Jr.....	26.00	13.00	10.04	14.65	19.92	26.72	110.33
29	Henry C. Mustin.....	25.80	13.45	10.40	13.45	24.14	21.76	113.00
30	John H. Roys.....	25.70	13.40	11.76	15.55	19.28	25.62	111.28
31	Richard G. McConnell.....	25.50	13.90	11.64	13.40	19.40	28.72	113.56
32	Earl P. Jessop.....	25.00	14.05	11.64	14.10	17.58	25.98	112.35
33	Kenneth G. Castleman.....	25.60	16.00	10.96	14.45	19.98	22.68	119.67
34	Charles P. Burt.....	26.10	13.20	10.60	13.95	19.50	28.72	112.12
35	George B. Rice.....	29.30	13.05	10.96	11.45	17.40	24.68	116.84
36	George J. Haunstein.....	25.50	13.15	11.00	11.20	18.50	26.62	115.97
37	Roland I. Curtin.....	26.70	12.80	11.24	12.80	19.80	24.72	118.06
38	Pope Washington.....	26.20	13.95	10.68	11.20	17.32	26.88	116.23
39	Edwin C. Blands.....	25.40	13.20	11.44	13.25	16.98	25.72	115.99
40	James B. Henry, Jr.....	25.70	13.05	10.68	13.45	18.84	22.88	114.60
41	Russell A. Deane.....	25.00	14.05	11.12	13.05	15.24	25.12	113.58
42	Arthur Crenshaw.....	25.70	12.50	10.12	12.70	16.20	25.72	112.96
43	Amos Brinson, Jr.....	27.00	14.05	10.28	13.15	15.62	25.12	115.22
44	Henry M. Deak, Jr.....	25.20	13.05	10.76	12.50	16.62	21.68	110.83

Merit-roll of the Naval Cadets of the Third Class—51 members—Annual Examination, June, 1894—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish and German.	Mechanical drawing.	Discipline.	Aggregate.
		Maxima	40	20	16	20	24	32	152
d. d.	† Walter S. Volkmar	24.80	12.50	10.60	13.10	21.72	27.04	109.76
	† William L. Littlefield	24.90	13.25	11.04	12.75	22.02	24.00	107.96
	Paul E. Taussig	26.20	11.75	9.88	12.50	19.08	27.12	106.53
	† Robert P. P. Cooke	25.50	11.80	10.68	15.20	15.96	24.08	103.22
	§ r James M. Love, jr.	25.50	12.00	10.04	12.00	16.56	22.64	98.74
§ r	John J. Bryant, jr.	20.80	9.15	10.24	11.70	17.52	22.64	92.05
§ r	Walter A. Wiley	18.20	9.60	10.84	11.90	16.02	23.28	89.84

d. d. Died July 23, 1894, at the navy-yard, New York, while attached to the U. S. practice-ship *Bancroft*.

Merit-roll of the Naval Cadets of the Fourth Class—77 members—Annual Examination June, 1894.

Order of annual merit	NAME	Algebra and geometry.	English and history	French, Spanish, and German	Discipline	Average
		Maxima.....	20	20	16	26
*1	William G. Du Bose.....	18.50	18.40	18.05	17.00	7.5
*2	Fletcher L. Sheffield.....	17.05	17.10	18.40	16.5	6.7
*3	Arthur J. Hepburn.....	16.70	16.85	17.95	13.8	6.5
*4	Harry E. Yarnell.....	16.35	17.95	16.05	16.32	6.4
*5	Harlan P. Perrill.....	17.15	17.65	16.05	13.96	6.5
*6	Joseph W. Powell.....	17.10	17.15	15.85	14.68	6.4
7	Daniel S. Mahony.....	16.45	17.60	16.50	13.60	6.4
8	Needham L. Jones.....	14.40	17.05	17.95	13.92	6.3
9	Victor S. Houston.....	14.30	14.30	19.40	14.20	6.3
10	Alfred W. Pressey.....	15.05	16.05	17.30	14.12	6.2
11	Leonard R. Sargent.....	15.05	17.65	15.95	13.76	6.2
12	Cyrus R. Miller.....	15.60	15.65	17.25	13.58	6.2
13	Ernest F. Eggert.....	15.65	16.60	16.25	13.72	6.2
14	David E. Thelen.....	16.20	16.70	14.00	11.96	6.0
15	Henry R. Herndon.....	14.55	17.05	16.00	13.65	6.0
16	Joseph W. Graeme.....	14.40	17.15	16.56	14.04	6.0
17	Henry L. Collins.....	17.10	14.65	15.00	13.76	6.0
18	Frederic R. Holman.....	14.40	15.85	16.20	13.81	6.0
19	Robert C. Bagby.....	12.95	15.80	17.55	13.81	6.0
20	Alfred C. Owen.....	14.55	15.55	16.20	13.81	6.0
21	Austin Kautz.....	14.85	14.50	16.85	13.84	6.0
22	William H. Reynolds.....	14.55	15.85	15.65	13.84	6.0
23	Gilbert Chase.....	13.95	15.55	16.20	13.96	6.0
24	John A. Day.....	15.20	14.35	18.00	12.00	5.9
25	Orin G. Murfin.....	15.25	15.60	14.15	14.45	5.9
26	William R. White.....	14.35	15.65	16.55	12.32	5.9
27	Joseph D. Terry.....	14.55	15.30	16.00	14.28	5.9
28	Peter L. Pratt.....	14.55	15.55	16.65	12.20	5.9
29	Henry Williams.....	14.70	15.45	14.60	13.84	5.9
30	Luther M. Overstreet.....	15.85	14.70	13.45	14.56	5.9
31	David F. Boyd.....	16.60	16.15	15.40	10.8	5.8
32	Irwin F. Landa.....	15.60	15.20	13.75	13.66	5.8
33	Frederic C. Kenyon.....	14.60	15.05	14.10	12.92	5.8
34	Clifton C. Riddle.....	15.75	14.85	14.85	13.92	5.8
35	Edward I. Hoopes.....	17.35	14.05	14.15	12.88	5.8
36	Charles T. Owens.....	14.10	15.65	14.70	13.28	5.8
37	Charles J. Naylor.....	17.00	14.15	15.80	13.96	5.8
38	Leone C. Richardson.....	15.15	14.00	13.65	13.76	5.8
39	W. L. McDowell.....	14.7	14.75	13.70	14.04	5.8
40	Walter R. Sexton.....	14.35	15.00	14.80	13.84	5.8
41	Osmond D. Duncan.....	14.50	14.65	13.05	14.06	5.8
42	Frederic C. Hart.....	14.80	14.10	14.50	13.66	5.8
43	William C. Anderson.....	14.05	14.15	15.15	13.52	5.8
44	Walter M. Falconer.....	14.15	14.80	14.15	12.72	5.8

Merit-roll of the Naval Cadets of the Fourth Class—77 members—Annual Examination, June, 1894—Continued.

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Discipline.	Aggregate.
		20	20	20	16	76
45	George Webber.....	13.30	14.35	14.20	13.88	55.73
46	Arthur St. C. Smith, jr.....	13.50	14.50	13.15	14.00	55.15
47	Eugene O. Sykes, jr.....	13.20	14.30	14.55	13.08	55.13
48	Robert W. Henderson.....	13.05	14.60	13.30	13.80	54.75
49	Joshua T. Ward.....	13.30	13.50	13.10	14.72	54.62
50	John F. Hilleary.....	13.95	13.60	13.45	13.60	54.60
51	Stanley H. McMullen.....	12.95	13.45	13.85	14.00	54.25
52	Nathan J. Shelton.....	12.75	12.90	15.00	13.52	54.17
53	Andrew T. Graham.....	13.20	13.50	13.05	14.16	53.91
54	Samuel G. Magill, jr.....	12.90	13.35	14.05	13.48	54.78
55	William D. Leahy.....	12.95	13.95	13.45	13.40	53.75
56	Albert H. McCarthy.....	13.45	13.80	12.85	13.56	54.66
57	Arthur L. Wessels.....	14.40	13.90	13.20	12.08	53.58
57	Henry N. Jenson.....	12.85	14.15	12.50	14.08	53.58
59	George Van Orden.....	13.05	13.40	13.55	12.28	52.88
60	Henry W. Mayo.....	12.70	13.35	13.55	11.08	50.68
f	John W. Morse.....	12.40	14.90	17.15	13.80	58.25
r	William N. Jeffers.....	12.10	14.30	18.05	12.48	56.93
f	Samuel W. Bryant.....	11.95	13.95	14.80	13.32	54.02
r	Richard J. Oglesby, jr.....	11.90	13.05	15.05	13.88	53.88
r	Grant Green.....	12.10	13.55	13.70	14.08	53.43
f	Horace T. Wells.....	13.00	13.50	12.30	14.16	52.96
f	Clarence S. Kempff.....	11.95	13.75	13.10	13.84	52.64
f	William P. Giles.....	13.10	13.55	11.05	14.28	52.58
f	Sheldon W. Anding.....	13.25	11.90	12.70	13.88	51.73
f	Dilly N. Pattison.....	12.45	12.75	12.15	13.64	50.99
§ r	Hugh K. Taylor.....	11.55	13.30	11.95	14.08	50.88
§ r	Yancey S. Williams.....	12.00	12.25	11.95	13.60	49.80
§ r	Douglas C. McDougal.....	11.95	12.20	12.35	12.96	49.46
§ r	William T. Tarrant.....	10.80	14.05	.....	13.80	.....
s	Benjamin L. Brockway.....	.....	.....	.....	.....	.....
s	George Brown, jr.....	.....	.....	.....	.....	.....
Pr	Trevor W. Leutze.....	.....	.....	.....	.....	.....

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.) *Provided*, however, That there shall not be at any time more in said Academy appointed at large than ten.—(*Act of Congress approved August 5, 1882.*)

III. The course of naval cadets is six years.—(*Rev. Stat.*, § 1520.) Four years at the Naval Academy and two years at sea, at the expiration of which time the cadet returns to the Academy for final graduation, and the district then becomes vacant.

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the naval cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. At least fifteen appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for naval cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but if it is not made by that time the Secretary of the Navy shall fill the vacancy by appointment of an actual resident of the district in which the vacancy exists, who shall have been for at least two years immediately preceding the date of his appointment an actual and bona fide resident of the district in which the vacancy exists and of the legal qualification under the law as now provided. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President.—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be between the ages of fifteen and twenty years and physically sound, well-formed, and of robust constitution."—(*Rev. Stat.*, § 1517.)

VII. Candidates who may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examination.

No leave of absence will be granted to Cadets of the fourth class.

EXAMINATION.

VIII. *"All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."*—(*Rev. Stat. § 1515.*)

IX. *"When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."*—(*Rev. Stat., § 1516.*)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy at the Naval Academy. Any one of the following conditions will be sufficient to cause the rejection of a candidate, viz:

Feeble constitution, inherited or acquired;

Retarded development;

Impaired general health;

Decided cachexia, diathesis, or predisposition;

Any disease, deformity, or result of injury that would impair efficiency, such as—

Weak or disordered intellect;

Contagious or communicable disease;

Unnatural curvature of spine, torticollis, or other deformity;

Inefficiency of either of the extremities or large articulations from any cause;

Epilepsy or other convulsions within five years;

Impaired vision, disease of the organs of vision, imperfect color sense; visual acuteness must not fall below fifteen twentieths of the normal in either eye;

Impaired hearing or disease of the ear;

Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;

Impediment of speech to such an extent as to impair efficiency in the performance of duty;

Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;

Hernia, complete or incomplete, or undescended testis;

Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;

Disease of the genito-urinary organs;

Chronic ulcers, ingrowing nails, large bunions, or other deformity of feet;

Loss of many teeth, or teeth generally unsound.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers, whether abstract or concrete, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon, and the relation between the Troy and Avoirdupois pounds, and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the test of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem that can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the use of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed, *e. g.*:

"They were always a strange family; they rarely acted like other people; their heads were in the right place, but their heads always seemed to be doing anything but what

ought." Such a sentence must be parsed *fully*, giving the part of speech, and kind case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words; thus—

Strange is a descriptive adjective, positive degree. It qualifies the noun *famili-*

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected thus—

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to have been there and seen it.* 5. *There's a sweet little cherubim sits up aloft to keep watch for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain-chains and the localities of the higher peaks; the position and course of the principal rivers, their tributaries and the bodies of water into which they flow; the position of important seas, bays, gulfs, and arms of the sea; the position of independent States, their boundaries and capital cities; the position and direction of great peninsulas, and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and of colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bodies of water on which cities are situated; the course of a vessel in making a voyage between well-known ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other States, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the examination will be of a general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and give their positions. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies; royal, proprietary, and charter. Name the colonies that originally existed within the present limits of Massachusetts; of Connecticut. When were these colonies united? What did the colony of Pennsylvania include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the *United States*, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as naval cadets, and become students at the Academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz:

One dress jacket.....	\$20.50	One jackknife.....	\$0.85
One blouse.....	11.50	Six sheets.....	3.45
Two pairs trousers.....	22.00	Hammock clews.....	.58
Two working suits.....	1.90	One pair of bathing trunks.....	.20
One overcoat.....	23.00	Three pairs white thread gloves.....	.75
One rubber coat.....	4.00	Two black silk neckties.....	.40
One rubber hat.....	.60	Two clothes bags.....	.46
Two pairs of regulation leggins..	1.50	One hammock mattress.....	3.00
One parade cap.....	2.60	a One requisition book.....	.40
One knit cap.....	.66	a One pass book.....	.40
One mug.....	.10	a Stencil, ink, and brush.....	.45
One soap box.....	.65	a One bottle of indelible ink.....	.18
One laundry book.....	.34	a One wash basin and pitcher....	.88
One pair of blankets.....	2.90	a One pair of gymnasium slippers..	1.10
Two pairs of high shoes.....	6.80	* One whisk.....	.15
One pair of overshoes.....	.72	* One coarse comb.....	.10
Eight white shirts.....	4.40	* One cake of soap.....	.10
Twelve linen collars.....	1.68	* One hairbrush.....	.55
Eight pairs of cuffs.....	2.00	* Stationery.....	.50
* Eight pairs of socks.....	1.84	* Twelve white handkerchiefs...	2.52
* Eight towels.....	1.84	* One pair of suspenders.....	.40
* Shaving outfit.....	1.61	* Four nightshirts.....	2.52
* Four pairs of drawers (winter)..	4.32	* One toothbrush.....	.21
b Four pairs of drawers (summer)..	1.60	* Thread and needles.....	.19
* Four undershirts (winter).....	4.32	* Blacking brush and blacking....	.66
b Four undershirts (summer).....	1.60	* Nailbrush.....	.25
One hand glass.....	.36		
			21.25
	125.34		

When moving into cadet quarters, cadets will supply themselves with the following articles, viz:

a Two bedspreads.....	\$2.40	One mirror.....	\$1.10
a Two pairs of drill gloves.....	1.10	a One rug.....	1.00
a One slop jar.....	.88	a One hair mattress.....	5.25
a Two spatter cloths.....	.66	a One broom.....	.29
One hair pillow.....	.75	Six pillowcases.....	1.38
	5.79		9.02

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice ship, viz:

Three working suits	\$2.85	One pair rubber leggins	\$1.00
Four woolen shirts	8.20	One pair high shoes	2.00
Three white sailor hats	1.20	One knit cap .....	.60
	<u>12.25</u>		<u>4.60</u>

Articles marked *a* will not be taken on board the practice ship.

Of the articles marked *b*, cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.

Each naval cadet must, on admission, deposit with the pay officer the sum of \$5 for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc	\$17.50
Deposit for books, etc	2.00
Total amount required	<u>19.50</u>

The value of clothing brought from home is to be deducted from this amount.

Each naval cadet *one month after admission* will be credited with the amount of his actual expenses in traveling from his home to the Academy.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution; arithmetical, geometrical, and harmonical progression.	Hall and Knight's Elementary Algebra. Hall and Knight's Higher Algebra Todhunter's Algebra.*
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Wentworth's Geometry.
<i>English Studies, History, and Law.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes or lectures.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Modern Languages.</i>	5	4	FRENCH: "Natural method of teaching languages."	Chardenal's Complete French Course. Marion's Le Verbe en quatre Tableaux Synoptiques. Termes Nautiques Portnain. Bellow's Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
<i>Mathematics.</i>	3	4	ALGEBRA. Course for first term continued. Development of algebraic functions by means of indeterminate coefficients and the binomial theorem; permutations and combinations; theory of probability; summation of series, continued fractions, logarithms, exponential equations, theory of equations, including the solution of numerical equations; determinants.	Hall and Knight's <i>Higher Algebra</i> . Bowditch's <i>Useful Tables</i> .
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Wentworth's <i>Geometry</i> .
<i>English Studies, History, and Law</i>	2	4	ENGLISH: Rhetoric and composition, choice and use of words, kinds of composition, narration and description; argumentative composition, exercises in the composition of letters and telegrams. Themes.	A. S. Hill's <i>Rhetoric</i> . Ayres's <i>Orthoepist</i> . Ayres's <i>Verbalist</i> . Webster's <i>Dictionary</i> .
	3	4	HISTORY: Progress of colonial development in America and the history of the United States, important points in the naval history of the United States, by notes or lectures.	Eliot's <i>History of the United States</i> . Mitchell's <i>Atlas</i> .
<i>Modern Languages.</i>	3	4	FRENCH: "Natural Method."	Berry's <i>La Langue Française</i> 1 ^{re} partie. Berry's <i>French Reader</i> . Bellow's <i>Dictionary</i> .
			SPANISH: (Given as an advanced course.) Natural Method	Worman's <i>First Steps</i> . Book. Knapp's <i>Spanish Grammar</i> . Seane's <i>Dictionary</i> . Dreyer's <i>Complete Method and German Verb Drill</i> .
			GERMAN: (Given as an advanced course.) Natural Method	Weyhebach und Gerskamp's <i>Deutsch Grammatik</i> . Whitney's <i>Dictionary</i> .

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Mathematics.	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections, representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order; projections of the sphere.	Church's Descriptive Geometry. Hendrickson-Dressel's Stereographic projection. Rittenhouse's Exercises in Descriptive Geometry Drawing. Chauvenet's Trigonometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle and the measurements of heights and distances.	Levett and Davison's Plane Trigonometry. Bowditch's Useful Tables.
English Studies, History, and Law.	2	4	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seeley's English Lessons for English People. Abbott's How to Write Clearly. Ayres's Orthoëpist. Ayres's Verbalist. Webster's Dictionary.*
	2	4	LAW: The Constitution of the United States.	Andrews's Manual of the Constitution.
Modern Languages.	3	4	FRENCH: "Natural method." SPANISH: (Given as an advanced course.) "Natural method." GERMAN: (Given as an advanced course.) "Natural method."	Böcher's Series of French Plays. Bercy's La Langue Française, 2 ^e partie. Guerres Maritimes Jurien de la Gravière. Bellows's Dictionary.* Knapp's Spanish Grammar. Dreyspring's Cumulative Method and German Verb Drill. Wenckebach und Schrakamp's Deutsche Grammatik. Jeffcott and Toswell's German Newspaper Reading Book. Whitney's Dictionary

SECOND YEAR—THIRD CLASS—Continued.

FIRST TERM—continued.

Department	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mechanical Drawing.</i>	4	4	MECHANICAL DRAWING. Sketching from models, the use of instruments; construction of scales; notation and symbols used in mechanical drawings, construction of rectilinear and curved figures to scale, drawing section lines, round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	Tomlin's <i>Machine Construction.</i> Rittenhouse's <i>Exercises in Descriptive Geometry.</i> Drawing

SECOND TERM.

<i>Physics and Chemistry.</i>	5	4	PHYSICS. An elementary course is tended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory, experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures. CHEMISTRY. Recitations in general and organic chemistry. Practical work in the chemical laboratory, experiments illustrating the daily recitations and the determination of simple salts, acids and bases. Lectures.	Daniell's <i>Principles of Physics.</i> Practical Physics by Stewart and Gee Remsen's <i>General Chemistry.</i> Remsen's <i>Organic Chemistry.</i> Lecture Notes
<i>Mathematics.</i>	5	4	ANALYTICAL GEOMETRY. Equations of the straight line and of the conic sections. Transformation of coordinates, properties of the conic sections, equations to tangents and normals, determination of loci, discussion of the general equation of the second degree, equations of the plane, of lines in space, and of surfaces of the second order, the principal properties of surfaces of the second order, discussion of the general equation of the second degree in three variables.	C. Smith's <i>Conic Sections.</i> Aldis's <i>Solid Geometry.</i>

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Modern Languages.</i>	2	4	<p>FRENCH: Course of the first term continued.</p> <p>SPANISH: Course of the first term continued.</p> <p>GERMAN: Course of the first term continued.</p>	Same as for the first term.
<i>Mechanical Drawing.</i>	3½	4	<p>MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; isometrical drawing; drawing screws, bolts, nuts, and gearing; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.</p>	<p>Tomkin's Machine Construction.*</p> <p>Rittenhouse's Exercises in Descriptive Geometry Drawing.</p>

THIRD YEAR—SECOND CLASS.

FIRST TERM

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	1	4	SEAMANSHIP. Use of the compass, lead, and log; sh; mals, blocks and tackles, running rigging; description and use of sails and their fittings; purchasing weights; boats and their management; ground tackle; handling anchors; handling sails; port drills and evolutions; management under sail duties of naval cadets; rules of the road.	Luce's Seaman's Handbook; Department circulars.
<i>Steam Engineering.</i>	3	4	PRINCIPLES OF MECHANISM: Marine engines and boilers. Properties of heat and its application to water; combustion; laws and properties of steam; types of marine boilers, comparative efficiency; names and uses of their attachments; hydrometers; scale and its prevention, types of marine engines, including condensers and pumps with explanation of the use of all the parts; screw propellers and paddle wheels, the indicator and its diagrams; power of the engine and computations relating thereto; casualties; care and management of steam machinery.	Goudere's Elements of Mechanism; Bennett's Marine Steam Engine; Gow's Notes and Problems in Elementary Mechanism.
<i>Mechanics and Applied Mathematics.</i>	5	2	DIFFERENTIAL CALCULUS: Functions, rates, differentials of functions, indeterminate forms, series, maxima and minima, geometrical applications, functions of two or more variables.	Bliss and Johnson's Differential Calculus.
	5	2	INTEGRAL CALCULUS: The methods of integration, definite integrals, quadrature of surfaces, cubature of volumes, rectification of curves, centers of gravity, moments of inertia, plane figures, rules for the approximate determination of areas and volumes, differential equations.	Johnson's Integral Calculus; Johnson's Differential Equations.

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	4	4	PHYSICS: Recitations on simple harmonic motion; wave motions, sound, light, and heat. Practical work in the physical laboratory; experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses; length of light waves. Photography. CHEMISTRY: Short course in chemical analysis.	Daniell's Principles of Physics. Ganot's Physics. Stewart's Treatise on Heat. Practical Physics, by Stewart and Gee. Kohlrusch's Physical Measurements. Lecture notes.
<i>Modern Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Jurien de la Gravière's Guerres Maritimes. Bellows's Dictionary. Langage Marin, Anglais-Français.
<i>Mechanical Drawing.</i>	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings; perspective.	Tomkin's Machine Construction.

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	1	4	Course of the first term continued.	Same as for the first term.
<i>Astronomy, Navigation, and Surveying.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular coordinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac.	Young's General Astronomy. Bowditch's Navigator. American Ephemeris and Nautical Almanac.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM—continued

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
<i>Steam Engineering</i>	3	4	Course of the first term continued	Same as for the first term.
<i>Mechanics and Applied Mathematics</i>	5	4	MECHANICS: Kinematics; dynamics; kinematics; hydromechanics; the motion of projectile; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Johnson's Mechanics. Bower's Hydraulics.
<i>Physics and Chemistry.</i>	4	4	PHYSICS. Recitations in light and heat concluded. Electricity and magnetism commenced. Practical work in the physical laboratory: calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of static and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.	Same as for the first term. Thompson's Electricity and Magnetism. Ayrton's Practical Electricity. Day's Exercises in Electrical Measurements. Lecture Notes.
<i>Modern Languages.</i>	1	14	FRENCH. Reading French newspapers, and conversation on subjects of the day; themes and written translations.	Same as for the first term and French exercises.

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship Naval Construction, and Naval Tactics.</i>	3	4	SEAMANSHIP: Stowage and organization; boats and their management; ground tackle; handling anchors; handling sails; management under sail and under steam; turning and maneuvering; wharfing, docking, towing, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; use of sounding machine.	Luce's Seamanship. Department Circulars. Navy Regulations.
			NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities; steam steering gear; steam capstan; plans of ships and reproduction in mold loft; finding the displacement of ships and center of buoyancy, etc. NAVAL TACTICS: Organization of the fleet; school of the ship; section and aquadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.	Special Notes and Drawings. Navy Department Pamphlets. White's Manual of Naval Architecture. Welch's Text-book of Naval Architecture.
<i>Ordnance and Gunnery.</i>	3	4	GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors that arise in practice at sea.	Accuracy and Probability of Fire (Naval Academy publications).

FOURTH YEAR—FIRST CLASS—LINK DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
<i>Ordnance and Gunnery—Continued.</i>	3	4	<p>INFANTRY AND ARTILLERY TACTICS: As applied to the handling of naval forces on shore.</p> <p>GUNNERY: The motion of projectiles in a nonresisting medium and in air; the methods of finding the trajectory, the remaining velocity, and the angle of fall; the dangerous space; sighting and pointing guns; the errors liable to occur in practice at sea, and the methods of avoiding them, the preparation of range tables, and corrections for jump and drift; the determination of ranges at sea.</p>	<p>Instructions for the Artillery of the United States Navy</p> <p>Text-book of Gunnery, by the United States Army Academy</p> <p>Exterior Ballistics, by the United States Army Academy</p> <p>Ordnance Notes, by the United States Navy</p>
<i>Astronomy, Navigation, and Surveying.</i>	4	4	<p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems, determination of meridian distances.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; levelling; plotting a survey; hydrographical surveying: tidal observations, current observations, sailing directions, the form of the earth, with special reference to the construction of charts, projections, running surveys.</p>	<p>Chanzy's Navigation and Practical Astronomy.</p> <p>Walker's Navigation and Surveying.</p> <p>Rowditch's Navigation and Surveying.</p> <p>American Flag and Navigation.</p> <p>Phelps's Practical Hydrographic Surveying.</p> <p>Projection Tables.</p> <p>Craig's Azimuth.</p>
<i>Mechanics and Applied Mathematics.</i>	3	1	METHOD OF LEAST SQUARES. The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations, conditional observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS. Elasticity; stress and strain; theory of structures; strength and deflection of beams, beams of uniform resistance.	<p>Cutler and ...</p> <p>Lessons in Applied Mechanics.</p> <p>Cutler's Applied Mechanics.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics and Chemistry.</i>	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy, testing cables and electric light wires; experiments upon induction; practice in photography and micro-photography.	Same as for the second class year. Thompson's <i>Dynamo Electric Machinery</i> . Lecture Notes.

SECOND TERM.

<i>Seamanship, Naval Construction, and Naval Tactics.</i>	4	4	Course of the first term continued.	Same as for the first term.
<i>Ordnance and Gunnery.</i>	5	4	<p>GUNNERY: Handling great guns; preparing ship for action; duties of officers and men when at quarters for exercise, and when engaged in battle; handling boat howitzers and machine guns afloat and on shore; landing of seamen and marines.</p> <p>ORDNANCE: The manufacture of guns; description of service guns; computation of the strength and shrinkage of guns; rifling; rotation and its influence on the motion of projectiles. The manufacture and use of gunpowder and other explosives; the force developed when explosives are fired in their own volume, and the equation of motion of the projectile in the bore of a gun on this hypothesis, and also on the hypothesis that the explosive burns progressively; the laws of burning of grains of gunpowder of various forms; the formulas of Noble and Abel connecting pressures with density of loading, and for determining the work of expansion in a gun; development of the principles involved in loading guns; formulas connecting muzzle velocities and pressures with the elements of loading.</p>	<p>Text-book of Ordnance and Gunnery (Naval Academy publication). Gunnery Drill Book for the New Armaments. (Bureau of Navigation publication.) The Elastic Strength of Guns (Naval Academy publication). Interior Ballistics (Naval Academy publication). Nomenclature of steel B. L. R. guns and carriages, and mounts for Hotchkiss guns. (Bureau of Ordnance.)</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
<i>Ordnance and Gunnery—Continued.</i>	5	4	GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control. AMMUNITION: Its preparation and use.	
<i>Astronomy, Navigation, and Surveying.</i>	4	4	THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes that take place upon a change of geographical position, the graphic representations of the amount and direction of the forces that act on the needle, and the mechanical correction of the deviation and heeling errors. PRACTICAL NAVIGATION. PRACTICAL SURVEYING.	Evans's Elementary Manual for the Recitations of the Compass in Iron Ships. Howell's Mathematical Theory of the Recitations of the Compass. Ditch's Practical Elements and Recitation of the Compass of the United States Navy.
<i>English Studies, History, and Law.</i>	2	4	INTERNATIONAL LAW: The objects, sources, and sanctions of international law; the laws of war, embargo, reprisal, and retention; blockade contraband of war, right of search, ship's papers and nationality; prizes; privateering; piracy, the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters; licenses to trade; recaptures.	Glass's Maritime International Law Wendley's International Law
	4	4	SPECIAL INSTRUCTIONS: General description of the human body and its functions; the arrest of hemorrhage; resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction, Fridays 7.30 to 9.30 p.m. additional.)	Martin's The Human Body and its Functions of Narcotics

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	2	4	<p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in wood, iron, and steel; systems of construction, subdivision and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and in the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities.</p>	<p>White's Manual of Naval Architecture. Thearle's Naval Architecture. Welch's Text-book of Naval Architecture. Special Notes and Drawings.</p>
<i>Steam Engineering.</i>	3	4	<p>MARINE ENGINES: General description of modern marine engines and their dependencies; expansion of steam; piston speed and size of cylinders; uses and construction of parts of a marine engine; calculations on twisting and bending moments; principles and construction of condensers and pumps; types of valves and valve gear, and valve diagrams; principles and construction of various types of propellers; the indicator and its diagrams; power of an engine and calculations relating thereto; lectures on the metallurgy of iron and steel; the production of bronzes and alloys with reference to their use in marine engineering.</p> <p>Objects of test trials; boiler trials and their results; friction of the engine, and the dynamometer; standard methods and examples of engine trials.</p>	<p>Seaton's Marine Engineering. Thurston's Engine and Boiler Trials.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued

Department	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Steam Engineering—Continued.</i>	2	4	BOILERS: Various types and efficiency of steam boilers; construction of boilers in detail, and materials used; details of fittings and attachments; causes of decay; care and preservation of boilers; fuels, solid and liquid; combustion of, with the methods of their application under natural and forced draft, their comparative qualities and properties, with instructions as to their selection for, and care of, as steam fuels; practical tests of the calorific value of fuels.	Shock's Steam Boilers Stromeyer's Marine Boiler Management and Construction
	3	4	DRAWING MACHINERY: The strains to which machinery is subjected, and the resistance offered to these strains; relative value of materials used in machinery as to cost and strength; testing materials; principles and considerations governing the design, drawing, specifications, and proportions of the various parts of engines and boilers, with practical application in the designing room.	Unwin's Elements of Machine Design—Parts I and II Shock's Steam Boilers
<i>Mechanics and Applied Mathematics.</i>	2	4	Same as for the line division.	Same as for the line division.
<i>Physics and Chemistry</i>	3	4	Same as for the line division.	Same as for the line division.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship, Naval Construction, and Naval Tactics.</i>	3	4	Course of the first term continued.	Same as for the first term.
<i>Steam Engineering.</i>	3	4	MARINE ENGINES: Course of the first term continued. Physical properties of steam; convertibility of heat and work; theory of the steam engine; air and heat engines; efficiency of an engine; theoretical considerations governing the expansion of steam; effects of clearance, wire drawing, jacketing, liquefaction, and re-vaporation; experiments on the steam engine and the methods of determining its efficiency.	Seaton's Marine Engineering. Thurston's Engine and Boiler Trials. Cotterill's Steam Engine Considered as a Heat Machine.
	3	4	BOILERS: Course of the first term continued.	Same as for the first term.
	3	4	DESIGNING MACHINERY: Course of the first term continued.	Same as for the first term.
<i>Mechanics and Applied Mathematics.</i>	3	4	APPLIED MECHANICS: Kinematics and dynamics of machines; transmission and conversion of energy by fluids.	Cotterill's Applied Mechanics. Cotterill and Slade's Lessons in Applied Mechanics. Bowser's Hydromechanics.
	2	4	SPECIAL INSTRUCTION: Same as for the line division.	Same as for the line division.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineering division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship, Naval Construction, and Naval Tactics					1	1	3	4	2	2
Ordnance and Gunnery							3	5		
Astronomy, Navigation, and Surveying						2	4	4		
Steam Engineering					3	3			8	9
Mechanics and Applied Mathematics					5	5	3		3	3
Physics and Chemistry			5 F	5	4	4	3		3	
Mathematics	6	5	5	5						
English Studies, History, and Law ..	5	5	4					2		
Modern Languages	5	5½	3	2	1 F	½ F				
Mechanical Drawing			4	3½	2					

SPECIAL INSTRUCTION.

The effects of alcohol, tobacco, and other narcotics	½ F	½ F
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F Friday 7:30 to 9:30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Departments.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Astronomy, Navigation, and Surveying	M. T. W. Th. F. (2)	M. F. S. (1), T. (3)		M. (3), W. F. S. (1)	
English Studies, History, and Law	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)			
Mathematics		M. W. Th. F. (3)	T. (3), S. (1)		
Mechanical Drawing			M. T. W. Th. F. (1)	M. W. F. (2)	M. W. F. (2)
Mechanics and Applied Mathematics			M. (2), F. (7:30 to 9:30 p. m.) [*]		
Modern Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	T. W. Th. F. (2)	T. Th. (2), F. (3)	M. T. Th. (1)
Ordnance and Gunnery					
Physics and Chemistry			M. (3)	T. W. Th. (3)	T. W. (3)
Seamanship, Naval Construction, and Naval Tactics			W. Th. F. (3)		{ W. F. S. (1), T. Th. (2), M. Th. F. (3) }
Steam Engineering					

SECOND TERM.

Astronomy, Navigation, and Surveying			M. T. (3)	M. T. Th. F. (1)	
English Studies, History, and Law	M. T. W. Th. F. (3)			W. (1), F. (2)	
Mathematics	M. T. W. Th. F. (1)				
Mechanical Drawing		M. (1), T. F. (3), S. (1)†			
Mechanics and Applied Mathematics			M. T. W. Th. F. (1)		T. Th. F. (2)
Modern Languages	M. T. W. Th. F. (2), S. (1)†	W. Th. (3)	S. (1), F. (7:30 to 9:30 p. m.) [*]	M. T. W. Th. (2), F. (3)	
Ordnance and Gunnery					
Physics and Chemistry		{ M. (3), T. W. Th. F. (1), F. (7:30 to 9:30 p. m.) } [*]	M. T. Th. F. (2)		
Seamanship, Naval Construction, and Naval Tactics			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Steam Engineering			W. Th. F. (3)		{ M. T. W. Th. F. (1), M. W. (2), T. F. (3) }
Special Instruction (Physiology and Hygiene).				S. (1)† F. (7:30 to 9:30 p. m.) [†]	S. (1)† F. (7:30 to 9:30 p. m.) [*]

* Lectures and practical instruction.

† Saturday period, second term, from January 31 to March 10.

TABLE OF COEFFICIENTS.

DEPARTMENT AND SUBJECTS.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation line division.	Maxima for final graduation engineer division.
Discipline	4	8	12	16	16	160	160		
<i>Seamanship, Naval Construction, and Naval Tactics.</i>									
Seamanship, Naval Construction, and Naval Tactics*			3	12	8		44	56	
Practice Cruise				2		72			
<i>Ordnance and Gunnery.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery				151		60		44	
Ordnance and Gunnery									
<i>Astronomy, Navigation, and Surveying.</i>									
Astronomy, Navigation, and Surveying			3	12			12	44	
Practice Cruise				2		68			
<i>Steam Engineering.</i>									
Steam Machinery, Marine Engines, and Boilers			8					30	
Summer Practical Work			3		5	44			
Marine Engines					10				
Designing Machinery					12				
Boilers					8		144		6
<i>Mechanics and Applied Mathematics.</i>									
Differential and Integral Calculus, and Mechanics			12						
Least Squares and Strength of Materials				5	5	66			
Mechanics					5		44		
<i>Physics and Chemistry.</i>									
Chemistry and Physics		5							
Physics			10	5	5	80	80		
<i>Mathematics.</i>									
Algebra and Geometry	5								
Trigonometry, Analytical Geometry, and Descriptive Geometry		10				60	60		
<i>English Studies, History, and Law.</i>									
English and History	5								
English and Law		4					36		
International Law				4		32		24	
<i>Modern Languages.</i>									
French, Spanish and German	5	5	3			32	32	24	24
<i>Mechanical Drawing.</i>									
Mechanical Drawing		6	3			36	36		
<i>Miscellaneous.</i>									
Special Instruction (Physiology and Hygiene)				2	2	8	8		
Cruise Report								16	16
Navigation Note Book, Journals, and Station Bills								6	12
Maxima for each class	76	152	228	304	304	760	760	280	280

* Seamanship and Naval Tactics for line division, alone.

† In making up the standing for a year the second term is given double the weight of the first.

‡ Navigation note books for line division alone.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sailmaking; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE AND GUNNERY.

Setting up drill; school of the soldier; school of the company; school of the battalion (infantry); skirmish drill; school of the battery; school of the battalion (artillery); exercises with broadside guns, pivot guns, boat guns, and machine guns; target practice with small arms; target practice afloat with machine guns, boat guns, rapid-fire guns, and great guns; smallsword exercise; broadsword exercise; bayonet exercise; cane exercise; handling and firing torpedoes; handling and preparing fuses for use; determination of the strength and elasticity of gun metal with testing machine; determination of muzzle velocities with the Schultz and Boulanger chronoscope; determination of pressures in guns by means of pressure gauges; experimental determination of range tables, also of the jump and the drift; the preparation and inspection of ordnance material.

Six medals are awarded annually for marksmanship; gold, silver, and bronze medals to the cadets of the first class, as first, second, and third prizes, respectively, for excellence in great-gun practice; and gold, silver, and bronze medals to the cadets of the second class, as first, second, and third prizes, for excellence in practice with the service rifle and revolver.

In June, 1894, the medals for excellence in great-gun practice were awarded as follows:

Gold medal to Cadet W. P. Scott, of Pennsylvania.

Silver medal to D. H. Cox, of New York.

Bronze medal to C. F. Snow, of Maine.

The medals for small-arm marksmanship were awarded in accordance with the result of a rifle match which took place in June, 1894, the competitors in which had won the right to shoot by qualifying during the practice at the several ranges of 100, 200, 400, 500, and 600 yards, with scores of 80 per cent or over of the possible maximum at each range. There were twenty-one competitors in the final match, the conditions of which were ten shots at each of the ranges of 200, 500, and 600 yards, and six shots with the revolver at each of the ranges of 20, 30, and 40 yards. Regulation targets were used, and the revolver score was given one-fourth weight.

The medals were awarded as follows:

Gold medal to W. S. Volkmar, of Pennsylvania.

Silver medal to C. M. Tozer, of New York.

Bronze medal to K. G. Castleman, of Kentucky.

ASTRONOMY, NAVIGATION, AND SURVEYING.

Navigation: Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth.

Surveying: Surveying, and constructing a chart of, a portion of the Severn River.

Compass Deviations: Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from the

observations finding the approximate and the exact coefficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a Navy compensating binnacle.

STEAM ENGINEERING.

Shopwork:

The Pattern Shop: Selection and treatment of different woods for different purposes. Elementary work of the carpenter shop, through mortising, joining etc. to finished pattern work.

The Foundry: Iron and brass castings; the making of bronzes, alloys, etc.

The Blacksmith Shop: Forging, welding, etc.; tempering, case hardening, etc. bending and quenching tests of metals.

The Boiler Shop: Riveting, soft and hard patching, calking, annealing, tube expanding, etc.; testing.

The Machine Shop: Vise bench work, machine tool work, including the setting of work, turning, planing, boring, slotting, etc.; pipe fitting; building, erecting and aligning of engines and engine fitting; preparation of working drawings and working from the same.

Shipwork:

Management of main and auxiliary engines: Getting up steam at leisure and in emergencies; fire-room and engine-room routine, firing, water-tending, and oiling; routine under way when desirable to obtain maximum speed; same for maximum steaming radius; management of engines while maneuvering at sea; determining the condition and locating defects in machinery while in motion; cause and prevention of explosion of boilers, steam pipes, gases in uptakes and in coal bunkers; lying under banked fires; coming to anchor; overhauling machinery, cleaning boilers and condensers; preservation of machinery of a vessel when out of commission; conducting progressive and full-power trials and the collecting of data.

Ordinary Casualties: Hot crown sheets, burst feed pipes, leaky boiler tubes and seams, burnt grate bars, hot pins and journals, fire in bunkers, flooded compartments.

Damages received in Battle: Preparations for action; temporary repairs and alternative devices and expedients to be adopted in event of receiving injury from shot or torpedoes; quick methods of disabling machinery about to fall into the hands of the enemy.

Instruments: Use of slide rule, averaging machine, apparatus for testing air and smoke gases; standardizing steam gauges and indicators.

Miscellaneous: Preparing specifications for purchase of machinery and stores, testing, inspection, and preservation of stores; preparation of various cements, paints, and varnishes in ordinary use; selection of coals; making estimates of the amount of coal on hand, prevention of deterioration, etc.; making of watch, quarter, and station bills.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week, the number of each exercise is indicated by a figure in parentheses.

FIRST CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.	1	Company.	Target, great guns (4).	Field artillery.	Steam tactics (4).
	2	Field artillery.	Seamanship (1).	Company.	Seamanship (1).
	3	Target, great guns (4).	Steam tactics (4).	Steam tactics (4).	Target, great guns (4).
	4	Battery drill (1).	Battery drill (1).	Battery drill (1).	Battery drill (1).
Nov.	1	Company.	Company.	Field artillery.	Field artillery.
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.	1	Steam.	Practical ordnance.	Practical electricity.	Sword exercise.
	2	Practical electricity.	Sword exercise.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Sword exercise.	Practical electricity.
	4	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.
Jan.	1	Steam.	Practical ordnance.	Practical electricity.	Sword exercise.
	2	Practical electricity.	Sword exercise.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Sword exercise.	Practical electricity.
	4	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.

SEMI-ANNUAL EXAMINATION. No Drills.

Feb.	1	Steam.	Seamanship.	Practical electricity.	Sword exercise.
	2	Practical electricity.	Sword exercise.	Steam.	Seamanship.
	3	Seamanship.	Steam.	Sword exercise.	Practical electricity.
	4	Sword exercise.	Practical electricity.	Seamanship.	Steam.
Mar.	1	Battalion artillery (4).	Battalion artillery (4).	Battalion artillery (1).	Battalion artillery (4).
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Target, great guns (4).	Steam tactics (4).	Skirmish (4).	Torpedoes (4).
	4	Battery drill (1).	Seamanship (1).	Battery drill (1).	Seamanship (1).
Apr.	1	Skirmish (4).	Torpedoes (4).	Target, great guns (4).	Steam tactics (4).
	2	Seamanship (1).	Landing party (1).	Seamanship (1).	Landing party (1).
	3	Steam tactics (4).	Target, great guns (4).	Torpedoes (4).	Skirmish (4).
	4	Seamanship (1).	Battery drill (1).	Seamanship (1).	Battery drill (1).
May	1	Torpedoes (4).	Skirmish (4).	Steam tactics (4).	Target, great guns (4).
	2	Landing party (1).	Seamanship (1).	Landing party (1).	Seamanship (1).
	3	Steam tactics (4).	Steam tactics (4).	Steam tactics (4).	Steam tactics (4).
	4	Battery drill (1).	Seamanship (1).	Battery drill (1).	Seamanship (1).
June 1 to 10.	1	Seamanship (1).	Landing party (1).	Seamanship (1).	Landing party (1).
	2	Seamanship (4).	Seamanship (4).	Battery drill (1).	Seamanship (4).
	3	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	4	Battery drill (1).	Seamanship (1).	Battery drill (1).	Seamanship (1).
June 10 to Aug. 28.	1	Seamanship (4).	Seamanship (4).	Seamanship (4).	Seamanship (4).
	2	Landing party (1).	Seamanship (1).	Landing party (1).	Seamanship (1).
	3	Deviation compass (4).	Deviation compass (4).	Deviation compass (4).	Deviation compass (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
June 10 to Aug. 28.	1	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	2	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	3	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).	Battalion infantry (4).
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
June 10 to Aug. 28.	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
June 10 to Aug. 28.	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Battle drill.	Battle drill.	Battle drill.	Battle drill.
	3	Battle drill.	Battle drill.	Battle drill.	Battle drill.
	4	Battle drill.	Battle drill.	Battle drill.	Battle drill.

ANNUAL EXAMINATION.

Practice cruise.

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month. Cadets of the Engineer Division will take part in drills on board the *Baneroft* when underway, in "Practical electricity," in "General steam tactics," and at "Fire quarters." At other times they will have "Steam drill."

SECOND CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct....	1	Company.	Target, machine guns (4).	Field artillery.	Steam tactics (4).
	2	Field artillery.	Seamanship (1). Steam tactics (4).	Company.	Seamanship (1). Target, machine guns (4).
	3	Target, machine guns (4).	Battery drill (1). Company.	Steam tactics (4).	Battery drill (1). Field artillery.
	4	Seamanship (1). Steam tactics (4).	Field artillery.	Seamanship (1). Target, machine guns (4).	Company.
Nov....	1	Battery drill (1). Battalion infantry.	Battalion infantry.	Battery drill (1). Battalion infantry.	Battalion infantry.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec....	1	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
	2	Steam.	Sword exercise.	Steam.	Signals (1). Seamanship (2).
	3	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam.
	4	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.
Jan....	1	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
	2	Steam.	Sword exercise.	Steam.	Signals (1). Seamanship (2).
	3	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam.
	4	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.

SEMI-ANNUAL EXAMINATION

Feb....	1	Steam.	Practical ordnance.	Steam.	Sword exercise.
	2	Steam.	Sword exercise.	Steam.	Practical ordnance.
	3	Practical ordnance.	Steam.	Sword exercise.	Steam.
	4	Sword exercise.	Steam.	Practical ordnance.	Steam.
Mar....	1	Battalion artillery (4).	Battalion artillery (4).	Battalion artillery (4).	Battalion artillery (4).
	2	Seamanship (1). Target, great guns (4).	Seamanship (1). Steam tactics (4).	Seamanship (1). Skirmish (4).	Seamanship (1). Target, small arms (4).
	3	Battery drill (1). Skirmish (4).	Seamanship (1). Target, small arms (4).	Battery drill (1). Target, great guns (4).	Seamanship (1). Steam tactics (4).
	4	Seamanship (1). Steam tactics (4).	Landing party (1). Target, great guns (4).	Seamanship (1). Target, small arms (4).	Skirmish (4). Battery drill (1).
Apr....	1	Seamanship (1). Target, small arms (4).	Battery drill (1). Skirmish (4).	Seamanship (1). Steam tactics (4).	Battery drill (1). Target, great guns (4).
	2	Landing party (1). Seamanship (4).	Seamanship (1). Seamanship.	Landing party (1). Seamanship (4).	Seamanship (1). Seamanship.
	3	Battery drill (1). Seamanship.	Seamanship.	Battery drill (1). Seamanship.	Seamanship.
	4	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).
May....	1	Battery drill.	Seamanship.	Battery drill.	Seamanship.
	2	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.
	3	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).
	4	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).	Battalion infantry (4). Seamanship (1).
June....	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
Sat	F	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	Sat	Battle drill.	Battle drill.	Battle drill.	Battle drill.

June 1 to 10

ANNUAL EXAMINATION

Examinations will be suspended from December 24 to January 2. There will be five quarters on one Wednesday afternoon in each month.

SECOND CLASS—Continued.

Week.	Day.	Period.	First section.	Second section.	Third section.
First.	Monday ...	1	Bench.	Bench.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Tuesday ...	1	Bench.	Bench.	Machine tools.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Wednesday ...	1	Bench.	Bench.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Thursday ...	1	Bench.	Bench.	Machine tools.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Friday	1	Bench.	Bench.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Saturday ...	1	Bench.	Bench.	Machine tools.
		2			
		3			
Second.	Monday ...	1	Bench.	Bench.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Tuesday ...	1	Bench.	Bench.	Machine tools.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Wednesday ...	1	Blacksmith shop.	Pattern and boiler shops.	Bench.
		2	Blacksmith shop.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Thursday ...	1	Blacksmith shop.	Pattern and boiler shops.	Bench.
		2	Target practice.	Pattern and boiler shops.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Friday ...	1	Blacksmith shop.	Pattern and boiler shops.	Bench.
		2	Blacksmith shop.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Saturday ...	1	Blacksmith shop.	Pattern and boiler shops.	Bench.
		2			
		3			
Third.	Monday ...	1	Pattern and boiler shops.	Blacksmith shop.	Bench.
		2	Pattern and boiler shops.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Tuesday ...	1	Pattern and boiler shops.	Blacksmith shop.	Bench.
		2	Target practice.	Blacksmith shop.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Wednesday ...	1	Pattern and boiler shops.	Blacksmith shop.	Bench.
		2	Pattern and boiler shops.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Thursday ...	1	Pattern and boiler shops.	Blacksmith shop.	Bench.
		2	Target practice.	Blacksmith shop.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Friday	1	Machine tools.	Machine tools.	Blacksmith shop.
		2	Machine tools.	Target practice.	Blacksmith shop.
		3	Target practice.	Target practice.	Target practice.
	Saturday ...	1	Machine tools.	Machine tools.	Blacksmith shop.
		2			
		3			
Fourth.	Monday ...	1	Machine tools.	Machine tools.	Blacksmith shop.
		2	Machine tools.	Target practice.	Blacksmith shop.
		3	Target practice.	Target practice.	Target practice.
	Tuesday ...	1	Machine tools.	Machine tools.	Blacksmith shop.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Wednesday ...	1	Machine tools.	Machine tools.	Pattern and boiler shops.
		2	Machine tools.	Target practice.	Pattern and boiler shops.
		3	Target practice.	Target practice.	Target practice.
	Thursday ...	1	Machine tools.	Machine tools.	Pattern and boiler shops.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Friday	1	Machine tools.	Machine tools.	Pattern and boiler shops.
		2	Machine tools.	Target practice.	Pattern and boiler shops.
		3	Target practice.	Target practice.	Target practice.
	Saturday ...	1	Machine tools.	Machine tools.	Pattern and boiler shops.
		2			
		3			

SECOND CLASS—Continued.

Week.	Day.	Period.	Fourth section.	Fifth section.	Sixth section.
First.	Monday	1	Machine tools.	Blacksmith shop.	Pattern and boiler shops.
		2	Target practice.	Blacksmith shop.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Tuesday	1	Machine tools.	Blacksmith shop.	Pattern and boiler shops.
		2	Machine tools.	Target practice.	Pattern and boiler shops.
		3	Target practice.	Target practice.	Target practice.
	Wednesday	1	Machine tools.	Blacksmith shop.	Pattern and boiler shops.
		2	Target practice.	Blacksmith shop.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Thursday	1	Machine tools.	Blacksmith shop.	Pattern and boiler shops.
		2	Machine tools.	Target practice.	Pattern and boiler shops.
		3	Target practice.	Target practice.	Target practice.
	Friday	1	Machine tools.	Pattern and boiler shops.	Blacksmith shop.
		2	Target practice.	Pattern and boiler shops.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Saturday	1	Machine tools.	Pattern and boiler shops.	Blacksmith shop.
		2			
		3			
Second.	Monday	1	Machine tools.	Pattern and boiler shops.	Blacksmith shop.
		2	Target practice.	Pattern and boiler shops.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Tuesday	1	Machine tools.	Pattern and boiler shops.	Blacksmith shop.
		2	Machine tools.	Target practice.	Blacksmith shop.
		3	Target practice.	Target practice.	Target practice.
	Wednesday	1	Bench.	Machine tools.	Machine tools.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Thursday	1	Bench.	Machine tools.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Friday	1	Bench.	Machine tools.	Machine tools.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Saturday	1	Bench.	Machine tools.	Machine tools.
		2			
		3			
Third.	Monday	1	Bench.	Machine tools.	Machine tools.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Tuesday	1	Bench.	Machine tools.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Wednesday	1	Bench.	Machine tools.	Machine tools.
		2	Target practice.	Machine tools.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Thursday	1	Bench.	Machine tools.	Machine tools.
		2	Bench.	Target practice.	Machine tools.
		3	Target practice.	Target practice.	Target practice.
	Friday	1	Pattern and boiler shops.	Bench.	Bench.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Saturday	1	Pattern and boiler shops.	Bench.	Bench.
		2			
		3			
Fourth.	Monday	1	Pattern and boiler shops.	Bench.	Bench.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Tuesday	1	Pattern and boiler shops.	Bench.	Bench.
		2	Pattern and boiler shops.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Wednesday	1	Blacksmith shop.	Bench.	Bench.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Thursday	1	Blacksmith shop.	Bench.	Bench.
		2	Blacksmith shop.	Target practice.	Bench.
		3	Target practice.	Target practice.	Target practice.
	Friday	1	Blacksmith shop.	Bench.	Bench.
		2	Target practice.	Bench.	Target practice.
		3	Target practice.	Target practice.	Target practice.
	Saturday	1	Blacksmith shop.	Bench.	Bench.
		2			
		3			

NOTE. First period was on to 12 m.; second period 12 to 1 p.m.; third period 1 p.m. to 5 p.m.

THIRD CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.	1	Company.	Boats (4). Seamanship (1).	Field artillery.	Boats (4). Seamanship (1).
	2	Field artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill (1).
	3	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Field artillery.
	4	Boats (4). Battery drill (1).	Field artillery.	Boats (4). Battery drill (1).	Company.
Nov.	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
Dec.	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	1	Steam.	Seamanship.	Target, small arms(3) Great guns (2).	Sword exercise.
	2	Target, small arms(3) Great guns (2).	Sword exercise.	Steam.	Seamanship.
	3	Seamanship.	Steam.	Sword exercise.	Target, small arms(3) Great guns (2).
Jan.	4	Sword exercise.	Target, small arms(3) Great guns (2).	Seamanship.	Steam.
	1	Steam.	Seamanship.	Target, small arms(3) Great guns (2).	Sword exercise
	2	Target, small arms(3) Great guns (2).	Sword exercise.	Steam.	Seamanship.
	3	Seamanship.	Steam.	Sword exercise.	Target, small arms(3) Great guns (2).
	4	Sword exercise.	Target, small arms(3) Great guns (2).	Seamanship.	Steam.

SEMI-ANNUAL EXAMINATION.

Feb.	1	Steam.	Signals (3). Seamanship (2).	Target, small arms(3) Great guns (2).	Sword exercise.
	2	Target, small arms(3) Great guns (2).	Sword exercise.	Steam.	Signals (3). Seamanship (2).
	3	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Target, small arms(3) Great guns (2).
	4	Sword exercise.	Target, small arms(3) Great guns (2).	Signals (3). Seamanship (2).	Steam.
Mar.	1	Battalion artillery (4) Seamanship (1)	Battalion artillery (4) Seamanship (1).	Battalion artillery (4) Seamanship (1).	Battalion artillery (4) Seamanship (1).
	2	Target, small arms(4) Battery drill (1).	Seamanship.	Skirmish (4). Battery drill (1).	Boats (4). Seamanship (1).
	3	Skirmish (4). Seamanship (1).	Boats (4). Landing party (1).	Target, small arms(4) Seamanship (1).	Skirmish (4). Landing party (1).
	4	Seamanship.	Target, small arms(4) Battery drill (1).	Boats (4). Seamanship (1).	Skirmish (4). Battery drill (1).
Apr.	1	Boats (4). Landing party (1).	Skirmish (4). Seamanship (1).	Seamanship (4). Landing party (1).	Target, small arms(4) Seamanship (1).
	2	Seamanship (4). Battery drill (1).	Seamanship.	Seamanship (4). Battery drill (1).	Seamanship.
	3	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).
	4	Battery drill.	Seamanship.	Battery drill.	Seamanship.
May.	1	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.
	2	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).	Company (4). Seamanship (1).
	3	Battalion infantry (4) Seamanship (1).	Battalion infantry (4) Seamanship (1).	Battalion infantry (4) Seamanship (1).	Battalion infantry (4) Seamanship (1).
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
T. W. Th. F. S.	1	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	3	Boats.	Boats.	Boats.	Boats.
	4	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
June 1 to 10.	1	Battle drill.	Battle drill.	Battle drill.	Battle drill.
	2				
	3				
	4				

ANNUAL EXAMINATION.

Practice cruise.

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on Wednesday afternoon in each month.

FOURTH CLASS.

Academic months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
Oct.....	1	Company.	Boats (4). Seamanship (1).	Field artillery.	Boats (4). Seamanship (1)
	2	Field artillery.	Boats (4). Battery drill (1).	Company	Boats (4). Battery drill (1).
	3	Boats (4). Seamanship (1)	Company.	Boats (4). Seamanship (1).	Field artillery.
	4	Boats (4). Battery drill (1).	Field artillery.	Boats (4). Battery drill (1)	Company
Nov.....	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Seamanship.	Seamanship.	Seamanship.	Seamanship (1)
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec.....	1	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	2	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	3	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	4	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Jan.....	1	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	2	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	3	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	4	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Feb.....	1	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	2	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	3	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	4	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Mar.....	1	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	2	Gymnastics (4). Battery drill (1)	Seamanship.	Skirmish (4). Battery drill (1)	Boats (4). Seamanship (1).
	3	Skirmish (4). Seamanship (1).	Boats (4). Landing party (1).	Gymnastics (4). Seamanship (1).	Boats (4). Seamanship (1).
	4	Seamanship.	Gymnastics (4). Battery drill (1).	Boats (4). Seamanship (1).	Skirmish (4). Battery drill (1).
Apr.....	1	Boats (4). Landing party (1).	Skirmish (4). Seamanship (1).	Seamanship (1). Landing party (4)	Seamanship (1). Gymnastics (4).
	2	Seamanship (4). Battery drill (1).	Seamanship.	Seamanship (4). Battery drill (1).	Seamanship (4). Seamanship (1).
	3	Seamanship.	Seamanship (4). Landing party (1).	Seamanship.	Seamanship (4). Landing party (1).
	4	Battery drill.	Seamanship.	Battery drill.	Seamanship.
May.....	1	Seamanship (4). Landing party (1)	Seamanship.	Seamanship (4). Landing party (1)	Seamanship.
	2	Company (4).	Company (4).	Company (4).	Company (4).
	3	Seamanship (1). Battalion infantry (4)	Seamanship (1). Battalion infantry (4)	Seamanship (1). Battalion infantry (4)	Seamanship (1). Battalion infantry (4)
	4	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
Jun.....	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Boats.	Boats.
Jul.....	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Boats.	Boats.
Aug.....	1	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	2	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	3	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	4	Boats.	Boats.	Boats.	Boats.
Sept.....	1	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	2	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	3	School of soldier.	School of soldier.	School of soldier.	School of soldier.
	4	School of soldier.	School of soldier.	School of soldier.	School of soldier.

SS on 12 days.

Practical instruction is extended from December 24 to January 2. There will be five quarters on the Western afternoon in each month.

SUMMARY OF PRACTICAL INSTRUCTION.

KIND OF INSTRUCTION.	DURING THE ACADEMIC YEAR.				Total number of instructions during academic year.	DURING SUMMER MONTHS.				During month of September, fourth class.	Total number of instructions, exclusive of practice cruise.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
Seamanship, including stripping and rigging ship.....	33	30	37	35	135	(*)		(*)	(*)		135
Rigging loft.....			15	15	30						30
Boats under oars, or sail.....			15	15	30	(*)	15	(*)	(*)		45
Naval tactics with steam launches.....	12	4			16		5				21
Navy signals, day.....		5			5	(*)	3				8
Navy signals, night.....						(*)	3				3
Army signals, day.....		5	5		10		2				12
Army signals, night.....							2				2
Monitor, with great gun practice.....	4				4						4
General quarters.....	7	7	7	7	28	(*)		(*)	(*)		28
General quarters, with target practice.....	4	4	4	4	16	(*)		(*)	(*)		16
Target practice, great guns.....	8	4			12		5				17
Pivot guns.....			5	5	10						10
Broadside guns.....			5	5	10	(*)		(*)	(*)		10
Torpedoes.....	4				4						4
Practical ordnance.....	5	5			10						10
Howitzers afloat.....							5				5
Target practice, howitzers.....							5				5
School of section.....										10	10
School of battery.....	4	5	5	5	19						19
School of battalion artillery.....	9	9	9	9	36						36
Target practice, machine guns.....		5			5		5				10
Target practice, small arms.....			9		9		5				14
Target practice, pistols.....			5		5						5
School of the soldier.....										24	24
School of the company.....	4	5	9	9	27						27

SUMMARY OF PRACTICAL INSTRUCTION—Continued.

Kind of instruction.	DURING THE ACADEMIC YEAR.				Total num- ber of in- structions during academic year.	DURING SUMMER MONTHS.				During month of Septem- ber, fourth class.	Total num- ber of in- structions, exclusive of practice cruises.
	First class.	Second class.	Third class.	Fourth class.		First class.	Second class.	Third class.	Fourth class.		
On board of the battleship, infantry	11	11	11	11	44	.....	.....	.....	.....	.....	44
Sketch drill	4	4	4	4	16	.....	.....	.....	.....	.....	16
Brass band	15	9	.....	.....	24	.....	.....	.....	.....	.....	24
Small arms	5	15	16	.....	36	.....	.....	.....	.....	.....	36
Practical instruction in dissection of compass	4	.....	.....	.....	4	( )	( )	.....	.....	.....	4
Practical instruction, navigation	114	.....	.....	.....	.....	( )	.....	.....	.....	.....	114
Practical instruction, surveying	110	.....	.....	.....	.....	.....	.....	.....	.....	.....	110
Machine shop and running shop engines	30 and 113	30	.....	.....	63	.....	54	.....	.....	.....	114 and 113
Running steam launch	.....	5	.....	.....	5	.....	6	.....	.....	.....	11
Practical instruction in chemistry	.....	.....	113	.....	.....	.....	.....	.....	.....	.....	113
Gymnastics and boxing	.....	.....	19	19	19	.....	.....	.....	.....	.....	19
Swimming	.....	.....	.....	.....	.....	.....	.....	.....	.....	24	24
Dancing	.....	.....	.....	20	20	.....	.....	.....	.....	.....	20

* Practice cruises.

† Study periods.

The instructions in seamanship and gunnery on board of the Practice Steamers are also made instructions in running and managing the engines and boilers of those vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

FIFTY-FIRST ACADEMIC YEAR.

1895-'96.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1896.

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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the Administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, United States Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school, and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a board of visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

graduation, an honorable discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress approved March 2, 1889, provides that "the academic board of the Naval Academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the Naval Academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available."

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years."

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities for training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1865 the Academy was removed back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 11th of March, 1867, the official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1869.

The term of the academic course was changed by law, March 3, 1873, from three to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanical chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two classes of engineers who had entered the Academy in 1867. After an interval of four years in October, 1871, a new class of cadet engineers was admitted. This class followed a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

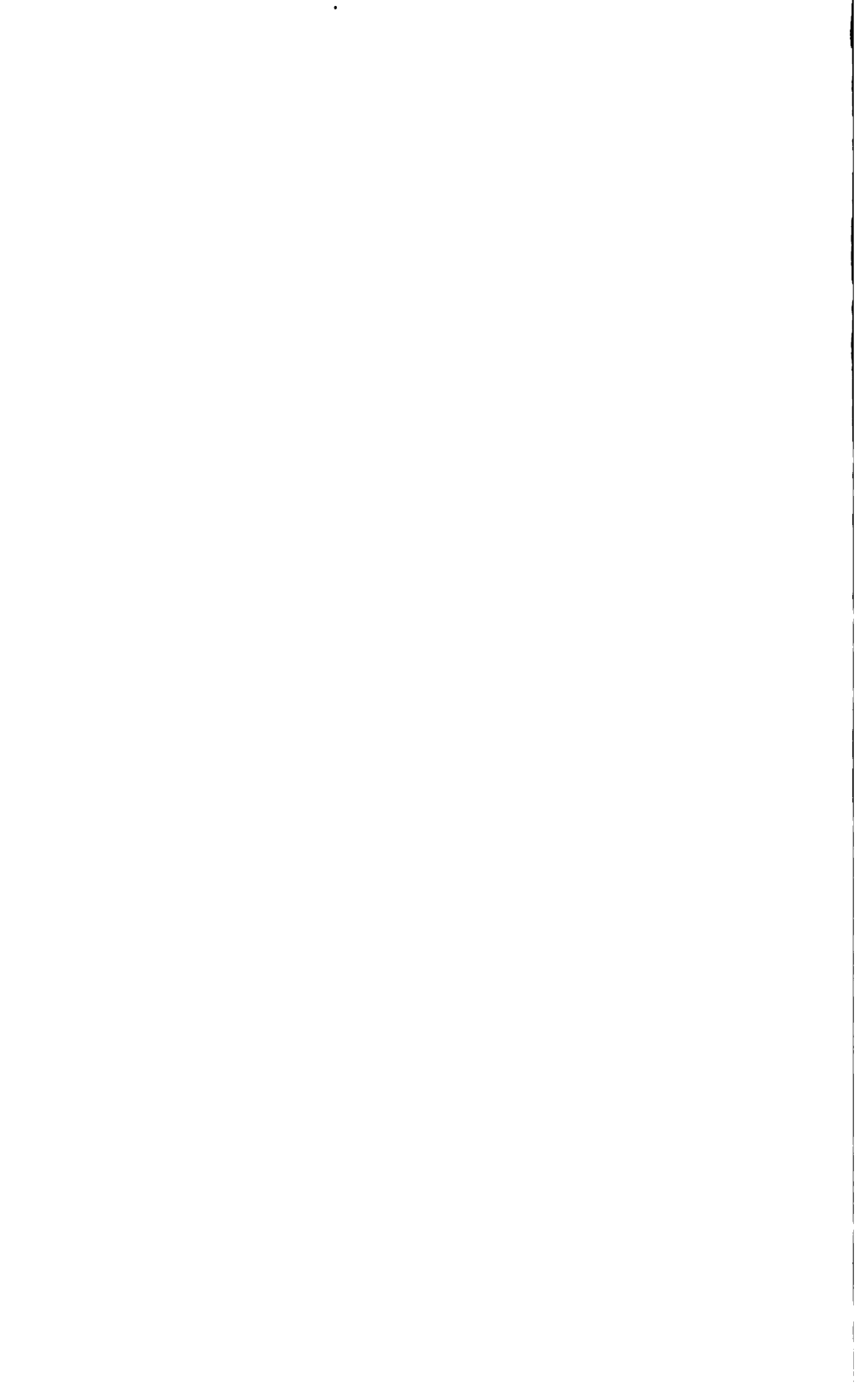
By an act of Congress approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and engineer corps of the navy and of the marine corps; and provided farther, That no greater number of appointments into those grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year; such appointments to be made from the graduates of the year, at the conclusion of their six years' course, in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall restrict the number of appointments from such graduates below ten in each year, nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a surplus of graduates, those who do not receive such appointment shall be given a certificate of

graduation, an honorable discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress approved March 2, 1889, provides that "the academic board of the Naval Academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the navy and marine corps of the navy shall bear to the number of vacancies to be supplied from the academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the navy; and the cadets so assigned to the line and marine corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the navy, and the cadets so assigned to the engineer corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the engineer corps of the navy, and the cadets shall thereafter, and until final graduation at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and marine corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the navy and marine corps; and the vacancies in the lowest grades of the commissioned officers of the engineer corps of the navy shall be filled in like manner by appointments from the final graduates of the engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the academic board of the Naval Academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the academic board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years' course below twelve in each year to the line of the navy, and not less than two shall be appointed annually to the engineer corps of the navy, nor less than one annually to the marine corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available."

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the academy shall be fifteen years and the maximum age twenty years."



SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

	Assumed command.
Commander Franklin Buchanan	Sept. 3, 1845
Commander George P. Upshur	Mar. 15, 1847
Commander Cornelius K. Stribling	July 1, 1850
Commander Louis M. Goldsborough	Nov. 1, 1853
Captain George S. Blake	Sept. 15, 1857
Rear-Admiral David D. Porter	Sept. 9, 1865
Commodore John L. Worden	Dec. 1, 1869
Rear-Admiral C. R. P. Rodgers	Sept. 22, 1874
Commodore Foxhall A. Parker	July 1, 1878
Rear-Admiral George B. Balch	Aug. 2, 1879
Rear-Admiral C. R. P. Rodgers	June 13, 1881
Captain F. M. Ramsay	Nov. 14, 1881
Commander W. T. Sampson	Sept. 9, 1886
Captain R. L. Pythian	June 30, 1890
Captain P. H. Cooper	Nov. 15, 1894

BOARD OF VISITORS, JUNE, 1895.

Honorable CHARLES J. FAULKNER, U. S. Senate, W. Va., *President*.
Honorable J. A. T. HULL, House of Representatives, Iowa, *Vice-President*.
Honorable F. T. DUBOIS, U. S. Senate, Idaho.
Honorable J. D. SAYERS, House of Representatives, Texas.
Honorable F. C. TATE, House of Representatives, Georgia.
Honorable J. B. HENDERSON, St. Louis, Missouri.
Reverend M. M. BENTON, Louisville, Kentucky.
Mr. ROBERT M. THOMPSON, New York City, N. Y.
Colonel A. F. FLEET, Mexico, Missouri.
Mr. E. P. MORRISSETT, Montgomery, Alabama.
Professor THOMAS R. LOUNSBURY, New Haven, Connecticut.
Professor W. M. THORNTON, Charlottesville, Virginia.

ACADEMIC CALENDAR.

1895-1896.

1895.

October 1.—Beginning of first term Tuesday.

1896.

January 27-February 1.—Semi-annual examination . . . Monday-Saturday.

February 1.—End of first term Saturday.

May 15.—Examination of candidates for admission as naval
cadets Friday.

May 30.—End of academic year, 1895-'96 Saturday.

June 1-6.—Annual examination Monday-Saturday.

September 1.—Examination of candidates for admission as naval
cadets Tuesday.

October 1.—Beginning of first term, 1896-'97 Thursday.

The academic months end on the following days:

1895-1896.

October	November 2	February	February 2.
November	November 30	March	March 2.
December	December 28	April	April 2.
January	January 25	May	May 2.

1896-1897.

October	October 31	December	December 2.
November	November 28	January	January 2.

CALENDAR FOR 1895-96.

SEPTEMBER.							APRIL.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
1	2	3	4	5	6	7	---	---	---	1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	---
29	30	---	---	---	---	---	26	27	28	29	30	---	---
OCTOBER.							MAY.						
---	---	1	2	3	4	5	---	---	---	---	1	2	---
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30	31	---	---	24	25	26	27	28	29	30
---	---	---	---	---	---	---	31	---	---	---	---	---	---
NOVEMBER.							JUNE.						
---	---	---	---	---	1	2	---	1	2	3	4	5	6
3	4	5	6	7	8	9	7	8	9	10	11	12	13
10	11	12	13	14	15	16	14	15	16	17	18	19	20
17	18	19	20	21	22	23	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28	29	30	---	---	---	---
DECEMBER.							JULY.						
1	2	3	4	5	6	7	---	---	---	1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25
29	30	31	---	---	---	---	26	27	28	29	30	31	---
JANUARY.							AUGUST.						
---	---	---	1	2	3	4	---	---	---	---	---	1	---
5	6	7	8	9	10	11	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22
26	27	28	29	30	31	---	23	24	25	26	27	28	29
---	---	---	---	---	---	---	30	31	---	---	---	---	---
FEBRUARY.							SEPTEMBER.						
---	---	---	---	---	---	1	---	---	---	---	---	---	---
2	3	4	5	6	7	8	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28	29	30	---	---	---
MARCH.							OCTOBER.						
1	2	3	4	5	6	7	---	---	---	---	1	2	3
8	9	10	11	12	13	14	4	5	6	7	8	9	10
15	16	17	18	19	20	21	11	12	13	14	15	16	17
22	23	24	25	26	27	28	18	19	20	21	22	23	24
29	30	31	---	---	---	---	25	26	27	28	29	30	31

OFFICERS

ATTACHED TO THE

UNITED STATES NAVAL ACADEMY.

SUPERINTENDENT,

CAPTAIN P. H. COOPER.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT-COMMANDER A. ROSS.

Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT W. P. POTTER.

Commandant of Cadets and Head of Department of Discipline,

COMMANDER W. H. BROWNSON.

LIEUTENANT C. E. COLAHAN, *Assistant.*

LIEUTENANT T. PORTER, *Assistant and Drill Officer.*

LIEUTENANT D. DANIELS, *Assistant and Drill Officer.*

LIEUTENANT P. W. HOUBIGAN, *Assistant and Drill Officer.*

SEAMANSHIP.

Head of Department,

LIEUTENANT-COMMANDER W. T. SWINBURNE.

Assistants,

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LIEUTENANT R. M. DOYLE,

LIEUTENANT DEWITT COFFMAN.

ORDNANCE.

Head of Department,

LIEUTENANT ALEXANDER MCCRACKIN.

Assistants,

LIEUTENANT J. H. GLENNON,

LIEUTENANT J. M. ELLICOTT,

ENSIGN E. MOALE, JR.

16 OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

Sword Master,

A. J. CONSERVIER.

Assistant Sword Masters,

J. B. RETZ,

G. HEINTZ.

NAVIGATION.

Head of Department.

LIEUTENANT-COMMANDER B. F. TILLEY.

Assistants,

LIEUTENANT J. A. NORRIS,

LIEUTENANT C. J. BUSH,

LIEUTENANT JOHN GIBSON

STEAM ENGINEERING.

Head of Department.

CHIEF ENGINEER C. W. RAE

Assistants,

PASSED ASSISTANT ENGINEER F. H. ELDREDGE,

PASSED ASSISTANT ENGINEER F. W. BARTLETT,

PASSED ASSISTANT ENGINEER L. D. MINER.

ASSISTANT ENGINEER H. W. JONES,

ASSISTANT ENGINEER H. O. STICKNEY.

MECHANICS

Head of Department.

LIEUTENANT-COMMANDER CHARLES BELKNAP.

Assistants,

LIEUTENANT M. L. WOOD,

LIEUTENANT W. H. ALLEN,

LIEUTENANT J. M. ORCHARD,

LIEUTENANT HARRY PHELPS,

PROFESSOR W. W. JOHNSON, A. M.

PHYSICS

Head of Department.

PROFESSOR N. M. TERRY, A. M., PH. D.

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LIEUTENANT J. E. CRAVEN,

LIEUTENANT J. A. HOOGEWERFF,

ENGIN J. W. OMAN,

PROFESSOR PAUL J. DASHIELL, PH. D.

MATHEMATICS.

Head of Department,

COMMANDER ASA WALKER.

Assistants,

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LIEUTENANT H. G. DRESSEL,
ENSIGN A. H. ROBERTSON,
ENSIGN L. H. CHANDLER,
ENSIGN W. V. PRATT,
ENSIGN G. R. MARVELL.

ENGLISH.

Head of Department,

LIEUTENANT-COMMANDER PERRY GARST.

Assistants,

LIEUTENANT E. B. UNDERWOOD,
LIEUTENANT J. P. PARKER,
LIEUTENANT G. R. CLARK,
ENSIGN E. W. EBERLE,
ENSIGN E. H. DURELL,
ENSIGN F. B. BASSETT,
PROFESSOR W. W. FAY, A. M.,
PROFESSOR A. N. BROWN.

LANGUAGES.

Head of Department,

LIEUTENANT G. L. DYER.

Assistants,

LIEUTENANT T. SNOWDEN,
ENSIGN B. F. HUTCHISON,
PROFESSOR JULES LEROUX,
PROFESSOR HENRI MARION,
PROFESSOR SAMUEL GARNER, PH. D.,
ASSISTANT PROFESSOR P. J. DES GARENNES, A. M.

DRAWING.

Head of Department,

LIEUTENANT G. P. COLVOCORESSES.

Assistants,

ENSIGN A. B. HOFF,
PROFESSOR C. F. BLAUVELT.

BRANCH OF PHYSICAL TRAINING.

In Charge,

SURGEON HENRY G. BEYER, M. D., PH. D.

Instructor,

MATTHEW STROHM.

OFFICERS NOT ATTACHED TO ACADEMIC STAFF.

LIEUTENANT-COMMANDER U. SKERREK, *in Charge of Ships.*
 MEDICAL DIRECTOR T. C. WALTON, M. D.
 SURGEON W. R. DU BOSE, M. D.
 PASSED ASSISTANT SURGEON S. S. WHITE, M. D.
 PASSED ASSISTANT SURGEON A. M. D. MCCORMICK, M. D.
 PAY DIRECTOR T. T. CARWELL, *Pay Officer.*
 PAY INSPECTOR W. GOLDSBOROUGH, *Commissary and General Storekeeper.*
 CHAPLAIN A. L. ROYCE.
 PROFESSOR M. OLIVER, U. S. N. *Librarian.*
 J. M. SPENCER, *Assistant Librarian.*
 R. M. CHASE, *Secretary.*
 GUNNER A. A. PHELPS.

Stores and Ships.

BOATSWAIN J. N. SINCLAIR,

*Mates.*C. J. MURPHY,
W. G. SMITH.

MARINE OFFICERS.

LIEUTENANT-COLONEL McLANE TILTON, *Commanding Marines,*
 CAPTAIN J. M. T. YOUNG,
 FIRST LIEUTENANT C. A. DOYEN,
 SECOND LIEUTENANT C. F. MACLIN.

ACADEMIC BOARD.

THE SUPERINTENDENT
 THE COMMANDANT OF CADETS
 THE HEAD OF THE DEPARTMENT OF SEAMANSHIP.
 THE HEAD OF THE DEPARTMENT OF ORDNANCE.
 THE HEAD OF THE DEPARTMENT OF NAVIGATION
 THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.
 THE HEAD OF THE DEPARTMENT OF MECHANICS
 THE HEAD OF THE DEPARTMENT OF PHYSICS
 THE HEAD OF THE DEPARTMENT OF MATHEMATICS.
 THE HEAD OF THE DEPARTMENT OF ENGLISH.
 THE HEAD OF THE DEPARTMENT OF LANGUAGE.
 THE HEAD OF THE DEPARTMENT OF DRAWING.

CADET OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

CADET LIEUTENANT-COMMANDER,

R. H. ROBINSON.

CADET LIEUTENANTS,

T. T. CRAVEN,

C. L. POOR,

J. H. HOLDEN,

E. McCAULEY, JR.

CADET LIEUTENANT AND ADJUTANT,

L. C. PALMER.

CADET PASSED ASSISTANT ENGINEER,

C. L. LEIPER.

CADET ASSISTANT ENGINEER,

E. T. FITZGERALD.

CADET JUNIOR LIEUTENANTS,

H. S. KIMBALL,

T. A. KEARNEY,

F. E. RIDGELEY,

D. W. WURTEBRAUGH.

CADET ENSIGNS,

A. E. KALBACH,

H. C. MUSTIN,

R. EARLE,

C. E. GILPIN.

CADET CHIEF PETTY OFFICER,

D. W. KNOX.

CADET PETTY OFFICERS OF THE FIRST CLASS.

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
M. ST. C. ELLIS,	J. H. ROYS,	E. P. JESSOP,	W. T. CLUVERIUS, JR.,
A. MACARTHUR, JR. JR.,	R. I. CURTIN,	D. M. WOOD,	R. E. WALKER,
A. BRONSON, JR.,	C. M. TOZER,	I. C. WETTENGEL,	W. G. DuROSE,
F. L. SHEFFIELD.	E. F. EGGERT.	J. W. POWELL.	H. E. YARNELL.

CADET PETTY OFFICERS OF THE SECOND CLASS.

<i>First Division.</i>	<i>Second Division.</i>	<i>Third Division.</i>	<i>Fourth Division.</i>
A. H. MCCARTHY,	W. H. REYNOLDS,	G. CHASE,	A. J. HEPBURN,
N. L. JONES,	H. P. PERRILL,	D. E. THELEEN,	W. P. GILES,
A. KAUTZ,	F. R. HOLMAN,	J. W. MORSE,	H. N. JENSEN,
O. G. MURFIN.	A. T. GRAHAM.	H. WILLIAMS.	L. M. OVERSTREET.

SUMMER CRUISE, 1895.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP MONONGAHELA.

June 9 to August 30.

COMMANDER W. H. BROWSON, <i>Commanding.</i>	ENSIGN L. H. CHANDLER, <i>Watch Officer.</i>
LIEUTENANT C. E. COLAHAN, <i>Executive Officer.</i>	ENSIGN A. B. HOFF, <i>Watch Officer.</i>
LIEUTENANT T. B. HOWARD, <i>Navigator.</i>	SURGEON H. G. BEYER.
LIEUTENANT W. H. ALLEN, <i>Watch Officer.</i>	ASSISTANT SURGEON H. D. WILSON.
LIEUTENANT J. P. PARKER, <i>Watch Officer.</i>	PAYMASTER M. C. McDONALD.
LIEUTENANT J. GIBSON, <i>Watch Officer.</i>	CHAPLAIN A. L. ROYCE.
ENSIGN J. W. OMAN, <i>Instructor in Navigation.</i>	

First Class—Line Division.

Biaset, H. O.,	Holden, J. H.,	McCanley, E., jr.,	Tenn, C. M.,
Cluverius, W. T., jr.,	Jessop, E. P.,	Mustin, H. C.,	Walker, R. E.,
Craven, T. T.,	Kalbach, A. E.,	Palmer, L. C.,	Wetengel, I. C.,
Curtin, R. I.,	Kearney, T. A.,	Poor, C. L.,	Wood, D. M.,
Earle, E.,	Kimball, H. S.,	Ridgely, F. E.,	Wurtsbaugh, D. W.,
Ellis, M. St. C.,	Knox, D. W.,	Robinson, R. H.,	
Gilpin, C. E.,	MacArthur, A., jr., jr.,	Roya, J. H.,	

Third Class.

Abele, C. A.,	Elson, H. J.,	Lehtfeldt, H. A.,	Schofield, J. A.,
Applewhite, S. C.,	England, W. H.,	Love, J. M., jr.,	Shane, L.,
Arnold, W. W.,	Evans, F. T.,	McIntyre, E. W.,	Smith, G. L.,
Babcock, J. F.,	Faller, G. W.,	Macy, U. S.,	Sweet, G. C.,
Boone, C.,	Farrin, T. B.,	Madison, Z. H., jr.,	Tardy, W. B.,
Briggs, W. O.,	Gilmer, J. B.,	Mannix, D. P.,	Tarrant, W. T.,
Briggs, Z. E.,	Graham, J. S.,	Marble, R. N., jr.,	Taylor, H. E.,
Brookway, B. L.,	Halligan, J., jr.,	Mitchell, A. N.,	Thorpe, G. C.,
Brown, G., jr.,	Hand, J. A., jr.,	Nelson, C. P.,	Watts, W. C.,
Brown, J. J.,	Hanrahan, D. C.,	Peterson, R. L.,	Wells, W. B.,
Brown, M. H.,	Hord, O. S.,	Pettingill, G. T.,	Williams, Henry,
Consten, E. T.,	Hunter, C. M.,	Pinney, F. L.,	Williams, Y. S.,
Cotton, L. A.,	Huntington, A. F.,	Purse, H. A.,	Woods, E.,
Cronan, W. P.,	Johnson, T. L.,	Roper, W. G.,	Wright, H. T.,
Dinger, H. C.,	Kress, J. C.,	Ratlidge, C. C.,	

Fourth Class.

Bailey, J. E.,	Ferguson, G. S.,	Mathews, J. E.,	Vernon, W. M.,
Beckner, J. T.,	Frawley, W. J.,	Morris, T. J.,	Watson, A. E.,
Bird, O. S.,	Gleason, H. M.,	Pope, R. E.,	West, A. S.,
Bissell, H. H.,	Greenalade, J. W.,	Royall, H. H.,	White, R. D.,
Cocks, H. C.,	Helm, F. P.,	Savidge, A. C.,	Wood, R. T.,
Conger, W. H.,	Horne, F. J.,	Sayles, W. E.,	Wright, L. E.,
Courtney, C. E.,	Johnson, A. W.,	Schmidt, O.,	Yates, F. H.,
Cresap, E. O.,	Kalbfus, E. C.,	Shapley, L. S.,	
Cull, J. E.,	Lackey, H. E.,	Tausig, J. E.,	
Fenner, E. B.,	Maguire, C. L.,	Thomas, S. B.,	

UNITED STATES PRACTICE SHIP BANCROFT.

June 8 to August 30.

LIEUTENANT-COMMANDER W. T. SWINBURNE, *Commanding.*LIEUTENANT J. A. NORRIS, *Executive Officer.*

PASSED ASSISTANT SURGEON S. S. WHITE.

LIEUTENANT DEW. COFFMAN, *Navigator.*

PASSED ASSISTANT ENGINEER F. W. BARTLETT.

ENSIGN E. H. DURELL, *Instructor.*

ASSISTANT ENGINEER H. O. STICKNEY.

NAVAL CADETS.

*First Class—Engineer Division.*Henry, J. B., jr.,
Rice, G. B.,
Burt, C. P.,Lincoln, G. S.,
Leiper, C. L.,
Castleman, K. G.,Littlefield, W. L.,
Fitzgerald, E. T.,
Crenshaw, A.Marshall, A. W.,
Washington, P.*Second Class.*First detail,
June 17 to June 29.Bryant, S. W.,
DuBois, W. G.,
Duncan, O. D.,
Eggert, E. F.,
Graham, A. T.,
Hilleary, J. F.,
Houston, V. S.,
Jones, N. L.,
Kantz, A.,
Leahy, W. D.,
Miller, C. R.,
Overstreet, L. M.,
Pressey, A. W.,
Sargent, L. R.,
White, W. R.Second detail,
July 6 to July 20.Asserson, W. C.,
Bagby, R. C.,
Collins, H. L.,
Giles, W. P.,
Hart, T. C.,
Henderson, B. W.,
Hepburn, A. J.,
Holman, F. R.,
Hoopes, E. T.,
Keenan, E. C.,
Kempff, C. S.,
McCarthy, A. H.,
Mahony, D. S.,
Morse, J. W.,
Perrill, H. P.,
Reynolds, W. H.,
Sexton, W. R.,
Sheffield, F. L.,
Van Orden, G.,
Williams, H.,
Yarnell, H. E.Third detail,
July 27 to August 9.Boyd, D. F., jr.,
Chase, G.,
Day, J. A.,
Graeme, J. W.,
Herndon, H. R.,
Jenson, H. N.,
Landis, I. F.,
McDowell, W.,
Magill, S. G., jr.,
Murnin, O. G.,
Naylor, C. J.,
Owen, A. C.,
Owens, C. T.,
Powell, J. W.,
Pratt, P. L.,
Richardson, L. C.,
Roehle, C. C.,
Smith, A. St. C., jr.,
Terry, J. D.,
Thelesen, D. E.,
Webber, G.,
Weasels, A. L.

SYNOPSIS OF THE CRUISE, 1895.

MONONGAHELA.

Cadets, first class, line division, and the third and fourth classes embarked June 8.

Sailed from Annapolis June 10.

Sailed from Lynnhaven Bay for Funchal, Madeira, June 13.

Arrived at Funchal, Madeira, July 13.

Sailed from Funchal July 18.

Arrived at Hampton Roads August 20.

Sailed from Hampton Roads August 22.

Arrived at Annapolis August 28.

BANCROFT.

Cadets, first class, engineer division, and the first detail of second class embarked June 17
 Sailed from Annapolis June 18.
 Arrived at Port Jefferson, L. I., June 21. Sailed June 26.
 Arrived at Newport News, Va., June 28. Sailed June 29.
 Arrived at Annapolis June 29. Sailed July 8.
 Arrived at Gardiners Bay, L. I., July 10. Sailed July 16.
 Arrived at Newport News, Va., July 18. Sailed July 18.
 Arrived at Annapolis July 20. Sailed July 29.
 Arrived at Gardiners Bay, L. I., July 31. Sailed August 5.
 Arrived at Newport News, Va., August 7. Sailed August 8.
 Arrived at Annapolis August 9.

PRACTICAL INSTRUCTION AT NAVAL ACADEMY.

WORK IN MACHINE SHOP FROM JUNE 10 TO AUGUST 14.

Naval cadets of first class, engineer division	1
Naval cadets of second class	2
On board practice ships <i>Monongahela</i> and <i>Bancroft</i>	3
Absent on sick leave	4

CLASSES OF THE NAVAL CADETS

AT THE BEGINNING OF THE ACADEMIC YEAR, 1895-'96.

[Corrected to October 4, 1895.]

Naval Cadets of the class appointed in 1890, performing required service afloat—Line Division—33 members.

Order of general merit.	Name.	State from which appointed.	Date of admission.
* 1	Robert, William Pierre.....	Mississippi.....	May 20, 1890
* 2	Cox, Daniel Hargate.....	New York.....	Sept. 9, 1890
* 3	Gillis, Irvin Van Gorder.....	New York.....	Sept. 6, 1890
* 4	Roberts, Thomas Gaines.....	Alabama.....	May 27, 1890
* 5	Sellers, David Foote.....	New Mexico.....	May 21, 1890
* 6	Adams, Lawrence Stowell.....	Pennsylvania.....	Sept. 26, 1890
7	Stone, Raymond.....	Alabama.....	Sept. 5, 1890
8	Tompkins, John Thomas.....	Louisiana.....	Sept. 6, 1890
9	McLean, Ridley.....	Tennessee.....	May 20, 1890
10	Webster, Charles.....	Massachusetts.....	Sept. 6, 1890
11	Babin, Provost.....	New York.....	Sept. 6, 1890
12	Jones, Lewis Burton.....	New York.....	May 21, 1890
13	Fullinwider, Simon Peter.....	Missouri.....	May 21, 1890
14	Graham, Stephen Victor.....	Michigan.....	May 19, 1890
15	Bennett, Ernest Linwood.....	Massachusetts.....	Sept. 24, 1890
16	Luby, John McClane.....	Texas.....	Sept. 8, 1890
17	Sandoz, Fritz Louis.....	Louisiana.....	May 19, 1890
18	Galbraith, Gilbert Smith.....	Pennsylvania.....	Sept. 8, 1890
19	Shaw, Melville Jones.....	Minnesota.....	Sept. 6, 1890
20	Kavanagh, Arthur Glynn.....	Nebraska.....	May 20, 1890
21	Bookwalter, Charles Sunner.....	Illinois.....	Sept. 8, 1890
22	Scott, William Pitt.....	Pennsylvania.....	May 20, 1890
23	Snow, Carlton Farwell.....	Maine.....	May 10, 1890
24	Osborn, Robert Hatfield.....	New York.....	May 23, 1890
25	Spear, Roscoe.....	Pennsylvania.....	May 23, 1890
26	Manion, Walter James.....	Louisiana.....	Sept. 6, 1890
27	McNeely, Robert Whitehead.....	North Carolina.....	Sept. 8, 1890
28	Turpin, Walter Stevens.....	Maryland.....	May 22, 1890
29	Bulmer, Roscoe Carlyle.....	Nevada.....	Sept. 26, 1890
30	Whitted, William Scott.....	North Carolina.....	May 20, 1890
31	Stone, George Loring Porter.....	Georgia.....	Sept. 26, 1890
32	Gelm, George Earl.....	New York.....	May 22, 1890
33	England, Clarence.....	Arkansas.....	Sept. 5, 1890

Engineer Division—13 members.

1	Hudgins, John Milton.....	Virginia.....	Sept. 8, 1890
2	McMorris, Boling Kavanagh.....	Alabama.....	Sept. 15, 1890
3	Hinds, Alfred Walton.....	Alabama.....	Sept. 6, 1890
4	Moody, Roscoe Charles.....	Maine.....	Sept. 8, 1890
5	Cooper, Ignatius Taylor.....	Delaware.....	May 20, 1890
6	Baker, Henry Thomas.....	Ohio.....	Oct. 7, 1890
7	Chappell, Ralph Hubert.....	Michigan.....	May 22, 1890
8	James, Leland Frierson.....	South Carolina.....	Sept. 9, 1890
9	Lyon, Frank.....	Kentucky.....	May 20, 1890
10	Reeves, Joseph Mason.....	Illinois.....	Sept. 8, 1890
11	Cone, Hutch Ingham.....	Florida.....	Sept. 5, 1890
12	Winship, Emory.....	Georgia.....	June 3, 1890
13	De Lany, Edwin Hayden.....	Tennessee.....	May 21, 1890

Naval Cadets of the class appointed in 1891, performing required service afloat—1st Division—27 members.

Order of general merit.	Name.	State from which appointed.	Date of admission.
* 1	Smith, Stuart Farrar	Pennsylvania	Sept. 4 : 91
* 2	Greesbeck, William Gerard	Ohio	Sept. 4 : 91
3	Brumby, Frank Hardeman	Georgia	Sept. 4 : 91
4	Baldwin, Frank Pardee	New Jersey	Sept. 4 : 91
5	Davidson, William Christopher	South Dakota	Sept. 20 : 91
6	Laning, Harris	Illinois	May 19 : 91
7	Bannon, Philip Michael	Maryland	May 19 : 91
8	Chester, Arthur Tremaine	At large	May 19 : 91
9	Monaghan, John Robert	Washington	Sept. 7 : 91
10	Rutler, Henry Varnum, jr	New York	Sept. 3 : 91
11	Walker, James Erling	North Carolina	Sept. 7 : 91
12	Cushman, William Reynolds	New York	Sept. 3 : 91
13	Todd, David Wooster	California	Sept. 4 : 91
14	Raby, James Joseph	Michigan	Sept. 9 : 91
15	Standley, William Harry	California	Sept. 7 : 91
16	Gherardi, Walter Rockwell	At large	Sept. 4 : 91
17	Klemann, John Valentine	New York	Sept. 10 : 91
18	Bennett, Kenneth Marratt	New Jersey	Sept. 6 : 91
19	McCormack, Michael James	Michigan	Sept. 6 : 91
20	Bagley, Worth	North Carolina	Sept. 7 : 91
21	Wadhams, Albion James	New York	Sept. 4 : 91
22	Barnes, Cassius Bartlett	Oklahoma	Sept. 7 : 91
23	Watson, Edward Howe	Kentucky	Sept. 7 : 91
24	Breckinridge, Joseph Cabell	Kentucky	Sept. 6 : 91
25	Knepper, Orlo Smith	Pennsylvania	Sept. 4 : 91
26	Hall, Newt Hamill	Texas	Sept. 7 : 91
27	Johnston, Rufus Zenas, jr	North Carolina	Sept. 10 : 91

Engineer Division—12 members.

1	Dick, Thomas Merritt	South Carolina	Sept. 8 : 91
2	Mallory, Charles King	Tennessee	Sept. 23 : 91
3	Mansfield, Newton	Ohio	Sept. 7 : 91
4	Garrison Daniel Merahan	New Jersey	June 1 : 91
5	Karne, Franklin D	Ohio	Sept. 20 : 91
6	Morton, James Proctor	Missouri	Sept. 9 : 91
7	Freeman, Frederick Newton	Indiana	Sept. 9 : 91
8	Walker, Charles Henry	Massachusetts	Sept. 8 : 91
9	Marshall, John Francis, jr	Texas	Sept. 6 : 91
10	Merritt, Darwin Robert	Iowa	Sept. 20 : 91
11	Dunn, Edward Howard	Connecticut	Sept. 1 : 91
12	Eckhardt, Ernest Frederick	Wisconsin	Sept. 1 : 91

Naval Cadets of the First Class—Line Division—26 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Bronson, Amon, jr.....	Nebraska.....	Sept. 30, 1892	4	22
Cluverius, Wat Tyler, jr.....	Louisiana.....	May 20, 1892	10	7
Craven, Thomas Tingey.....	New Hampshire.....	Sept. 19, 1892	7	15
Curtin, Roland Irvin.....	Pennsylvania.....	Sept. 6, 1892	7	15
Earle, Ralph.....	Massachusetts.....	Sept. 6, 1892	7	15
Ellis, Mark Saint Clair.....	Arkansas.....	July 1, 1892	8	19
Glavin, Charles Edward.....	Michigan.....	Sept. 6, 1892	7	15
Holden, Jonas Hannibal.....	Vermont.....	May 20, 1892	10	7
Jessop, Earl Percy.....	West Virginia.....	Sept. 6, 1892	7	15
Kalbach, Andrew Edwin.....	Pennsylvania.....	July 1, 1892	8	17
Kearney, Thomas Albert.....	Missouri.....	Sept. 6, 1892	7	15
Kimball, Henry Swift.....	Massachusetts.....	Sept. 6, 1892	7	15
Knox, Dudley Wright.....	Tennessee.....	Sept. 6, 1892	7	7
MacArthur, Arthur, jr., jr.....	Wisconsin.....	Sept. 6, 1892	7	15
McCauley, Edward, jr.....	New York.....	Oct. 10, 1892	7	15
Mustin, Henry Creskey.....	Tennessee.....	Sept. 6, 1892	7	15
Palmer, Leigh Carlyle.....	Missouri.....	Sept. 6, 1892	7	15
Poor, Charles Longstreet.....	New York.....	Sept. 6, 1892	7	15
Ridgely, Frank Eugene.....	At large.....	Sept. 6, 1892	7	15
Robinson, Richard Hallett.....	Ohio.....	Sept. 6, 1892	7	15
Roya, John Holley.....	New York.....	Sept. 6, 1892	7	15
Tozer, Charles Maxson.....	New York.....	Sept. 13, 1892	7	15
Walker, Ralph Eric.....	Indiana.....	May 20, 1892	10	7
Wettengel, Ivan Cyrus.....	Colorado.....	Sept. 6, 1892	7	15
Wood, Duncan Mahon.....	Alabama.....	Sept. 30, 1892	7	15
Wurtsbaugh, Daniel Wilbert.....	Texas.....	May 20, 1892	10	7

Engineer Division—12 members.

Bisset, Henry Overstreet.....	Maryland.....	Sept. 6, 1892	7	15
Burt, Charles Perry.....	Georgia.....	Sept. 6, 1892	6	4
Castleman, Kenneth Galleher.....	Kentucky.....	Sept. 6, 1892	4	26
Crenshaw, Arthur.....	Alabama.....	Sept. 6, 1892	6	4
Fitzgerald, Edward Thomas.....	Texas.....	Sept. 13, 1892	6	4
Henry, James Buchanan, jr.....	New York.....	Sept. 6, 1892	6	4
Leiper, Charles Lewis.....	Pennsylvania.....	Sept. 6, 1892	6	4
Lincoln, Gatewood Sanders.....	Missouri.....	May 20, 1892	8	26
Littlefield, William Lord.....	Massachusetts.....	Sept. 30, 1892	5	26
Marshall, Albert Ware.....	Texas.....	Sept. 6, 1892	6	4
Rice, George Benjamin.....	Kentucky.....	Sept. 6, 1892	6	4
Washington, Pope.....	North Carolina.....	Sept. 7, 1892	6	4

Naval Cadets of the Second Class—59 members.

Name.	State from which appointed.	Date of admission.	Saw service in present ship.	
			Months.	Days.
Anding, Sheldon Webb.....	Mississippi.....	May 19, 1893	5	7
Anderson, William Christian.....	New York.....	Sept. 25, 1893	2	0
Bagby, Robert Coleman.....	Missouri.....	Sept. 22, 1893	2	0
Boyd, David French, Jr.....	Alabama.....	May 19, 1893	6	0
Bryant, Samuel Woods.....	Pennsylvania.....	May 19, 1893	6	0
Chase, Gilbert.....	Virginia.....	Sept. 6, 1893	3	0
Collins, Henry Lafayette.....	Pennsylvania.....	Sept. 6, 1893	3	0
Day, John Arthur.....	New York.....	May 19, 1893	6	0
DeBose, William Gunnell.....	Georgia.....	Sept. 6, 1893	2	0
Duncan, Oscar Dibble.....	Alabama.....	Sept. 6, 1893	2	0
Eggert, Ernest Frederick.....	Michigan.....	Sept. 6, 1893	0	0
Falconer, Walter Maxwell.....	Ohio.....	Sept. 6, 1893	2	0
Giles, William Pinkney.....	Texas.....	May 30, 1893	6	0
Graeme, Joseph Wright.....	Pennsylvania.....	Sept. 6, 1893	3	0
Graham, Andrew Thomas.....	Illinois.....	Sept. 6, 1893	3	0
Hart, Thomas Charles.....	Michigan.....	May 19, 1893	6	0
Henderson, Robert William.....	Ohio.....	Sept. 22, 1893	2	0
Hepburn, Arthur Japy.....	Pennsylvania.....	Sept. 22, 1893	3	0
Hilliary, John Francis.....	Maryland.....	Sept. 6, 1893	3	0
Holman, Frederic Ralph.....	Iowa.....	May 19, 1893	6	0
Hoopes, Edward Trimble.....	Pennsylvania.....	Sept. 6, 1893	3	0
Houston, Victor Stuart.....	South Dakota.....	Sept. 22, 1893	3	0
Jenson, Henry Norman.....	Wisconsin.....	Sept. 6, 1893	3	0
Jones, Nedham Lee.....	Mississippi.....	Sept. 6, 1893	3	0
Kantz, Austin.....	Washington.....	May 19, 1893	6	0
Keenan, Ernest Clinton.....	New York.....	Sept. 6, 1893	3	0
Kempff, Clarence Selby.....	California.....	May 19, 1893	6	0
Landis, Irwin Franklin.....	Kansas.....	Sept. 6, 1893	3	0
Leahy, William Daniel.....	Wisconsin.....	May 19, 1893	6	0
McCarthy, Albert Henry.....	Iowa.....	Sept. 6, 1893	3	0
McDowell, William.....	Pennsylvania.....	May 19, 1893	6	0
Magill, Samuel George, Jr.....	North Dakota.....	May 19, 1893	6	0
Mahony, Daniel Sullivan.....	Michigan.....	Sept. 6, 1893	3	0
Miller, Cyrus Robinson.....	California.....	Sept. 6, 1893	3	0
Morse, John Wise.....	Massachusetts.....	Sept. 6, 1893	3	0
Murda, Orin Gould.....	Ohio.....	Sept. 6, 1893	2	0
Naylor, Charles Jacob.....	Pennsylvania.....	Sept. 6, 1893	3	0
Oberstreet, Luther Martin.....	Nebraska.....	Sept. 6, 1893	3	0
Owen, Alfred Crosby.....	District of Columbia.....	Sept. 6, 1893	3	0
Owens, Charles Truendale.....	Pennsylvania.....	Sept. 6, 1893	3	0
Perrill, Hazlan Page.....	Indiana.....	Sept. 6, 1893	2	0
Powell, Joseph Wright.....	New York.....	May 19, 1893	6	0
Pratt, Peter Lloyd.....	Illinois.....	May 19, 1893	6	0
Prosser, Alfred Warren.....	Nebraska.....	May 19, 1893	6	0
Reynolds, William Herbert.....	Georgia.....	Sept. 6, 1893	3	0
Richardson, Louis Clark.....	South Carolina.....	Sept. 6, 1893	3	0
Reeble, Clifton Charles.....	Maryland.....	Sept. 6, 1893	3	0
Sargent, Leonard Rudlett.....	Minnesota.....	Sept. 6, 1893	2	0
Saxton, Walton Russell.....	Illinois.....	May 19, 1893	6	0

Naval Cadets of the Second Class—59 members—Continued.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Sheffield, Fletcher Lamar.....	Georgia.....	Sept. 6, 1893	3	8
Smith, Arthur St. Clair, jr.....	Iowa.....	Sept. 6, 1893	3	7
Terry, Joseph Dandridge.....	Virginia.....	May 19, 1893	6	4
Theleen, David Elias.....	Wisconsin.....	Sept. 6, 1893	3	7
Van Orden, George.....	Michigan.....	May 19, 1893	6	5
Webber, George.....	Arkansas.....	Sept. 6, 1893	3	7
Wessels, Arthur Lewis.....	Iowa.....	May 19, 1893	6	4
White, William Russell.....	Arizona.....	Sept. 6, 1893	3	6
Williams, Hilary.....	Indiana.....	Sept. 6, 1893	3	8
Yarnell, Harry Ervin.....	Iowa.....	Sept. 6, 1893	3	8

Naval Cadets of the Third Class—50 members.

Name.	State from which appointed.	Date of admission.	Non service in parent corps.	
			Months.	Days.
Abele, Clarence Arthur.....	Massachusetts.....	Sept. 6, 1894	2	28
Applewhite, Scott Carter.....	Indiana.....	May 19, 1894	5	16
Arnold, William Wood.....	New Jersey.....	May 19, 1894	5	16
Babcock, John Franklin.....	New York.....	Sept. 22, 1894	2	23
Bosse, Charles.....	Ohio.....	Sept. 6, 1894	2	23
Briggs, Wilbur Gerheart.....	New York.....	Sept. 6, 1894	2	23
Briggs, Zeno Everett.....	Nebraska.....	Sept. 22, 1894	2	23
Brockway, Benjamin Little.....	South Carolina.....	Sept. 6, 1894	2	23
Brown, George, jr.....	At large.....	Sept. 6, 1894	2	28
Brown, Josephus Jarvis.....	Illinois.....	Sept. 6, 1894	2	23
Brown, Morris Hamilton.....	Indiana.....	May 19, 1894	5	16
Conston, Edward Theodore.....	Pennsylvania.....	May 19, 1894	5	16
Cotten, Lyman Atkinson.....	North Carolina.....	Sept. 6, 1894	2	23
Cronan, William Pigott.....	Connecticut.....	Sept. 6, 1894	2	23
Dinger, Henry Charles.....	Wisconsin.....	May 19, 1894	5	16
Elsen, Herman Jacob.....	Mississippi.....	May 19, 1894	5	16
England, William Herbert.....	Arkansas.....	Sept. 6, 1894	2	23
Evans, Frank Taylor.....	At large.....	Sept. 6, 1894	2	23
Faller, Guy William.....	Wisconsin.....	May 19, 1894	5	16
Farrin, Thomas Benjamin, jr.....	Illinois.....	Sept. 22, 1894	2	23
Gilmer, James Blair.....	Virginia.....	May 19, 1894	5	16
Graham, John Sleson.....	Colorado.....	May 19, 1894	5	16
Halligan, John, jr.....	Massachusetts.....	Sept. 6, 1894	2	23
Hand, James Alexander, jr.....	South Dakota.....	Sept. 6, 1894	2	23
Hanrahan, David Carlisle.....	Wisconsin.....	May 19, 1894	5	16
Hord, Oliver Saunders.....	Kentucky.....	May 19, 1894	5	16
Hunter, Charles Milton.....	Ohio.....	May 19, 1894	5	16
Huntington, Arthur Franklin.....	New York.....	Sept. 12, 1894	2	23
Johnson, Thomas Lee.....	Kansas.....	May 19, 1894	5	16
Krass, James Chatham.....	Pennsylvania.....	Sept. 6, 1894	2	23
Lehfeldt, Henry August.....	Wisconsin.....	May 19, 1894	5	16
Love, James Monroe, jr.....	Virginia.....	Sept. 6, 1894	2	23
McIntyre, Edward William.....	California.....	Sept. 6, 1894	2	23
Mary, Eliza Samuel.....	Missouri.....	Sept. 6, 1894	2	23
Madison, Zachariah Harvey.....	Illinois.....	Sept. 6, 1894	2	23
Mannix, Daniel Pratt.....	Ohio.....	Sept. 6, 1894	2	23
Marble, Ralph Norris, jr.....	Minnesota.....	May 19, 1894	5	16
Mitchell, Alexander Neely.....	Ohio.....	Sept. 6, 1894	2	23
Nelson, Charles Preston.....	Massachusetts.....	May 19, 1894	5	16
Peterson, Roscoe Lloyd.....	Michigan.....	June 1, 1894	5	16
Pettengill, George Tilford.....	Idaho at large.....	Sept. 22, 1894	2	23
Piney, Frank Lucius.....	Connecticut.....	Sept. 6, 1894	2	23
Purce, Henry Ashby.....	Georgia.....	Sept. 6, 1894	2	23
Raper, Walter Gordon.....	Georgia.....	Sept. 22, 1894	2	23
Rutledge, Carl Clyde.....	Ohio.....	May 19, 1894	5	16
Schofield, John Anderson.....	Missouri.....	Sept. 6, 1894	2	23
Shane, Louis.....	Nebraska.....	Sept. 6, 1894	2	23
Smith, George Leonard.....	New Hampshire.....	Sept. 6, 1894	2	23
Stet, George Cook.....	New York.....	Sept. 22, 1894	2	23

Naval Cadets of the Third Class—50 members—Continued.

Name.	State from which appointed	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Tardy, Walter Benjamin.....	Arkansas.....	May 19, 1894	5	16
Tarrant, William Theodore.....	Texas.....	Sept. 6, 1894	2	23
Taylor, Hugh Kirkpatrick.....	Ohio.....	Sept. 22, 1894	2	23
Thorpe, George Cyrus.....	Minnesota.....	May 19, 1894	4	23
Watts, William Carleton.....	Pennsylvania.....	Sept. 22, 1894	2	23
Wells, William Benefiel.....	Iowa.....	May 19, 1894	5	16
Williams, Henry.....	Maryland.....	Sept. 6, 1894	2	23
Williams, Yancey Sullivan.....	South Carolina.....	Sept. 6, 1894	2	23
Woods, Edward.....	Massachusetts.....	May 19, 1894	5	16
Wright, Henry Tutwiler.....	Alabama.....	Sept. 6, 1894	2	23

Naval Cadets of the Fourth Class—89 members.

Name.	State from which appointed.	Date of admission.	Age at date of admission		Sea service in previous	
			Years.	Months.	Months.	Days.
Amerson, Frederick Ann.....	New York.....	Sept. 6, 1885	16	4	0	
Bailey, John Elliot.....	Michigan.....	May 20, 1885	17	10	2	2
Beckner, John Tallafiero.....	Kentucky.....	May 20, 1885	16	9	2	11
Bird, Owen Stephen.....	At large.....	May 20, 1885	18	11	2	11
Bissell, Henry Harrison.....	New York.....	May 20, 1885	19	3	2	11
Bisset, Guy Aloysius.....	Kentucky.....	Sept. 6, 1885	16	1	0	
Bloch, Claude Charles.....	Kentucky.....	Sept. 6, 1885	17	2	0	
Bowers, John Treadwell.....	New Jersey.....	Sept. 6, 1885	14	3	0	
Bowman, Everett Newton.....	Iowa.....	Sept. 6, 1885	16	3	0	
Branch, Frank Oak.....	Indiana.....	Sept. 6, 1885	17	4	0	
Brinsar, Harry Lerch.....	Pennsylvania.....	Sept. 6, 1885	16	9	0	
Buchanan, Allen.....	Indiana.....	Sept. 6, 1885	14	9	0	
Buttrick, James Tyler.....	Rhode Island.....	Sept. 6, 1885	19	11	0	
Cashman, Frank Paul.....	Mississippi.....	Sept. 6, 1885	16	1	0	
Case, William Stanhope.....	Illinois.....	Sept. 6, 1885	16	1	0	
Clement, James Wilkinson Legare.....	South Carolina.....	Sept. 27, 1885	17	1	0	
Coke, Herbert Claiborne.....	Virginia.....	May 20, 1885	16	4	2	11
Cole, Cyrus Willard.....	Ohio.....	Sept. 6, 1885	19	3	0	
Combs, James Rockwell.....	Illinois.....	Sept. 6, 1885	19	1	0	
Conger, William Higgins.....	Pennsylvania.....	May 20, 1885	15	4	2	
Courtney, Charles Edward.....	New York.....	May 20, 1885	17	11	2	
Craighead, Walter Bailey.....	Louisiana.....	Sept. 20, 1885	17	7	0	
Cresap, Edward Ohio.....	Florida.....	May 20, 1885	17	6	2	
Cull, Julius Estey.....	Vermont.....	May 20, 1885	18	9	2	11
Doyle, Stafford Henry Rahal.....	South Carolina.....	Sept. 6, 1885	19	4	0	
Dungan, Paul Baxter.....	Nebraska.....	Sept. 6, 1885	14	2	0	
Evans, Herbert Heard.....	Mississippi.....	Sept. 6, 1885	15	3	0	
Fenner, Edward Blaine.....	New York.....	May 20, 1885	16	9	2	11
Ferguson, Garland Sevier.....	North Carolina.....	May 20, 1885	17	9	2	
Fischer, Charles Hermann.....	Pennsylvania.....	Sept. 6, 1885	19	11	0	
Forman, Charles William.....	Illinois.....	Sept. 6, 1885	16	11	0	
Frawley, William John.....	Massachusetts.....	May 20, 1885	16	9	2	
Gillett, Ransom Hooker.....	New York.....	Sept. 6, 1885	14	7	0	
Gleason, Henry Miller.....	Kansas.....	May 20, 1885	16	7	2	11
Greenleaf, John Wills.....	Ohio.....	May 20, 1885	15	4	2	
Hatch, Charles Byron.....	Illinois.....	Sept. 6, 1885	17	1	0	
Helm, Frank Pinckney, Jr.....	Kentucky.....	May 20, 1885	16	2	2	
Horne, Frederick Joseph Jr.....	New York.....	May 20, 1885	15	2	2	
Horn, Frank John.....	Illinois.....	Sept. 20, 1885	15	6	0	
Hunt, Walter Merrill.....	Maine.....	Sept. 6, 1885	18	11	0	
Irwin, Algernon Charles.....	Ohio.....	Sept. 6, 1885	16	2	0	
Jeffers, William Nicholas.....	New York.....	Sept. 20, 1885	16	6	0	
Johnson, Alfred Wilkinson.....	At large.....	May 20, 1885	16	6	2	11
Kalbue, Edward Clifford.....	At large.....	May 20, 1885	17	6	2	
Keamy, Phillip.....	Missouri.....	Sept. 6, 1885	17	8	4	
Kimberly, Victor Ashfield.....	Massachusetts.....	Sept. 6, 1885	17	10	0	
Lackey, Henry Ellis.....	At large.....	May 20, 1885	14	11	2	
Larimer, Edgar Brown.....	Kansas.....	Sept. 6, 1885	19	1	0	
Le, John Earl.....	Minnesota.....	Sept. 6, 1885	17	2	0	
Learty, Sterling Hicks.....	Missouri.....	Sept. 6, 1885	19	8	0	

Naval Cadets of the Fourth Class—89 members—Continued.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Years.	Months.
Maguire, Charles Lorenzo.....	Missouri.....	May 20, 1895	17	3	2	23
Major, Samuel Ira Morgan.....	Kentucky.....	Sept. 6, 1895	18	0	0	0
Mathews, James Edward.....	Illinois.....	May 20, 1895	19	4	2	23
Miller, William Siebel.....	Texas.....	Sept. 20, 1895	18	9	0	0
Montgomery, Russell.....	Oregon.....	Sept. 6, 1895	17	9	0	0
Morgan, Charles Elmer.....	West Virginia.....	Sept. 6, 1895	18	7	0	0
Morris, Thomas Jefferson.....	Ohio.....	May 20, 1895	19	3	2	23
Morrison, Farmer.....	Arkansas.....	Sept. 6, 1895	19	7	0	0
Muir, John Church.....	California.....	Sept. 6, 1895	16	5	0	0
Northrup, Arthur Weed.....	Ohio.....	Sept. 6, 1895	17	1	0	0
Osterhout, Frank Marcy.....	Montana, at large.....	Sept. 6, 1895	18	5	0	0
Parrish, John William Cardell.....	Indiana.....	Sept. 6, 1895	16	5	0	0
Pope, Ralph Elton.....	Nebraska.....	May 20, 1895	19	4	2	23
Royall, Hilary Herbert.....	Alabama.....	May 20, 1895	18	9	2	23
Sadler, Everitt Jay.....	Kansas.....	Sept. 20, 1895	16	4	0	0
Savidge, Albert Clinton.....	Pennsylvania.....	May 20, 1895	15	1	2	23
Sayles, William Randall.....	Rhode Island.....	May 20, 1895	17	5	2	23
Schmidt, Oscar.....	Indiana.....	May 27, 1895	16	8	2	23
Shackford, Chauncey.....	New Jersey.....	Sept. 6, 1895	18	5	0	0
Shapley, Lloyd Stowell.....	Missouri.....	May 30, 1895	19	6	2	23
Smith, Clyde Wilbur.....	Iowa.....	Sept. 6, 1895	16	10	0	0
Sparrow, Herbert George.....	Ohio.....	Sept. 6, 1895	18	1	0	0
Tausig, Joseph Kneifer.....	At large.....	May 30, 1895	17	9	2	23
Thomas, Samuel Brown.....	At large.....	May 30, 1895	17	4	2	23
Tomb, James Harvey.....	Missouri.....	Sept. 6, 1895	19	0	0	0
Turner, Robert Francis.....	Iowa.....	Sept. 6, 1895	19	8	0	0
Vernon, Walter Newhall.....	Oregon.....	May 20, 1895	17	3	2	23
Vincent, Roe Willis.....	Pennsylvania.....	Sept. 6, 1895	18	4	0	0
Watson, Adolphus Eugene.....	At large.....	May 30, 1895	16	9	2	23
Weichert, Ernest Augustus.....	Connecticut.....	Sept. 6, 1895	17	11	0	0
Wells, Daniel Hamner.....	Utah, at large.....	Sept. 6, 1895	19	11	0	0
West, Arthur Stuart.....	Georgia.....	May 20, 1895	16	2	2	23
White, Richard Drace.....	Missouri.....	May 20, 1895	18	1	2	23
Wood, Robert Thompson.....	New York.....	May 20, 1895	16	0	2	23
Wood, Welborn Cicero.....	Georgia.....	Sept. 6, 1895	19	8	0	0
Woodward, Clark Howell, Jr.....	Georgia.....	Sept. 6, 1895	18	6	0	0
Wright, Luke Edward.....	Tennessee.....	May 20, 1895	17	11	2	23
Wyman, Henry Lake.....	Illinois.....	Sept. 6, 1895	16	9	0	0
Yates, Fred Hammond.....	Maine.....	May 20, 1895	16	4	2	23

SUMMARY OF CADETS AT THE U. S. NAVAL ACADEMY.

October, 1895.

		Members.
First Class	Line Division.....	26
	Engineer Division.....	12
Second Class.....		59
Third Class.....		59
Fourth Class.....		89
Total.....		245

RELATIVE STANDING OF NAVAL CADETS FOR 1894-'95.

Classes of the Naval Cadets at the United States Naval Academy, at the close of the Academic Year 1894-'95; with the relative standing of the members in each class, as determined at the Annual Examination, June, 1895.

P Physically disqualified for the naval service.

** Received 85 per cent of the multiple.*

† Found deficient, allowed a reëxamination, passed, and continued with class.

§ Found deficient, and recommended to be dropped.

a Absent from examination.

e Selected for Engineer Division.

w Found deficient, warned.

Relative Standing of the Naval Cadets of the First Class

Order of annual merit.	Name.	State from which appointed.	Date of admission.	Age at date of admission.	
				Years	Months
20	Bagley, Worth	North Carolina	Sept. 7, 1901	17	.
2	Baldwin, Frank Pardee	New Jersey	Sept. 8, 1901	17	.
18	Bannon, Philip Michael	Maryland	May 19, 1901	19	2
17	Barnes, Cassius Bartlett	Oklahoma	Sept. 7, 1901	19	0
21	Bennett, Kenneth Maratt	New Jersey	Sept. 8, 1901	16	0
20	Breckinridge, Joseph Cabell	Kentucky	Sept. 8, 1901	19	0
4	Brumby, Frank Hardeman	Georgia	Sept. 8, 1901	16	.
8	Butler, Henry Varnum, Jr.	New York	Sept. 5, 1901	17	0
11	Chester, Arthur Tremaine	At large	May 19, 1900	13	0
10	Cushman, William Reynolds	New York	Sept. 5, 1901	16	0
3	Davidson, William Christopher ..	South Dakota	Sept. 25, 1901	19	2
23	Gherardi, Walter Rockwell	At large	Sept. 4, 1901	16	.
5	Groesbeck, William Gerard	Ohio	Sept. 4, 1901	17	0
25	Hall, Newt Hamill	Texas	Sept. 7, 1901	19	0
16	Johnston, Rufus Zenas, Jr.	North Carolina	Sept. 10, 1901	17	2
11	Klemann, John Valentine	New York	Sept. 10, 1901	13	.
22	Knepper, Orlo Smith	Pennsylvania	Sept. 4, 1901	16	2
6	Laning, Harris	Illinois	May 19, 1901	17	.
19	McCormack, Michael James	Michigan	Sept. 8, 1901	17	.
7	Monaghan, John Robert	Washington	Sept. 7, 1901	16	2
15	Raby, James Joseph	Michigan	Sept. 9, 1901	16	.
27	Sayers, Joseph Draper, Jr.	New York	Sept. 5, 1901	16	0
01	Smith, Stuart Farrar	Pennsylvania	Sept. 4, 1901	16	.
14	Standley, William Harry	California	Sept. 7, 1901	16	0
12	Todd, David Wooster	California	Sept. 8, 1901	17	2
20	Vostal, Samuel Curtis	Indiana	May 19, 1901	16	1
24	Walsham, Albion James	New York	Sept. 4, 1901	16	0
9	Walker, James Erling	North Carolina	Sept. 7, 1901	17	0
26	Watson, Edward Howe	Kentucky	Sept. 7, 1901	17	0

Line Division—29 members—Annual Examination, June, 1895.

Order of merit in—												Sea service in practice ships.		
Seamanship, naval construction, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Efficiency.	Conduct.	Number of demerits.	Months.	Days.	Order of annual merit.
27	17	28	24	6	25	26	22	9	10	28	101	5	15	28
3	7	2	4	3	6	2	10	9	2	13	36	5	15	2
13	3	26	22	24	25	15	24	24	3	12	33	8	8	18
19	22	13	11	26	7	10	17	28	25	23	68	5	2	17
24	10	19	20	25	21	21	18	13	21	18	52	5	15	21
29	21	29	28	4	18	28	1	19	21	27	97	5	15	29
6	22	3	1	1	5	9	4	14	27	6	22	5	11	4
8	4	7	15	15	10	5	29	16	4	8	31	5	15	8
9	9	12	16	12	15	26	22	7	13	13	38	5	25	13
12	5	14	7	17	2	19	21	5	15	21	66	5	15	10
1	12	4	9	2	11	4	4	2	5	5	22	5	11	3
16	16	24	22	22	29	25	20	18	12	15	43	5	15	23
5	14	4	3	5	3	3	11	27	13	20	57	5	15	5
28	24	27	24	13	15	21	16	26	17	7	16	2	22	25
14	15	9	13	22	25	14	24	17	17	22	70	5	15	16
11	26	11	10	17	8	11	12	11	29	11	31	5	15	11
21	29	17	16	21	20	18	27	15	28	19	53	5	15	22
3	2	6	5	9	14	7	9	8	7	2	13	8	4	6
22	19	22	29	20	24	26	8	1	7	1	7	5	15	19
16	25	9	7	8	4	8	3	19	21	9	31	5	15	7
22	8	21	11	12	16	12	23	19	17	3	16	5	15	15
26	28	23	26	26	22	24	6	5	26	20	81	5	15	27
2	1	1	2	7	1	1	2	7	1	4	16	5	4	*1
16	6	16	20	17	17	13	14	4	5	9	32	5	15	14
7	13	15	14	10	25	21	15	3	11	15	43	4	18	12
14	26	20	18	28	12	20	7	29	24	17	53	8	8	20
20	19	18	19	13	18	15	28	12	13	25	88	5	15	24
10	10	8	6	10	9	6	19	23	15	24	76	5	15	9
25	18	25	27	29	23	29	13	24	20	25	87	4	15	26

Relative Standing of the Naval Cadets of the First Class

Order of annual merit.	Name.	State from which appointed.	Date of admission.	Age at date of admission.	
				Years	Months
* 2	Dick, Thomas Merritt	South Carolina	Sept. 5, 1891	14	
11	Dunn, Edward Howard	Connecticut	Sept. 5, 1891	16	
12	Eckhardt, Ernest Frederick	Wisconsin	Sept. 5, 1891	14	
5	Freeman, Frederick Newton	Indiana	Sept. 9, 1891	13	
3	Garrison, Daniel Mershon	New Jersey	June 1, 1891	17	
6	Karna, Franklin D.	Ohio	Sept. 30, 1891	17	
* 1	Hallory, Charles King	Tennessee	Sept. 25, 1891	14	
4	Mansfield, Newton	Ohio	Sept. 7, 1891	17	
10	Marshall John Francis, Jr.	Texas	Sept. 6, 1891	17	
9	Merritt, Darwin Robert	Iowa	Sept. 10, 1891	19	
8	Morton, James Proctor	Missouri	Sept. 9, 1891	17	
7	Walker, Charles Henry	Massachusetts	Sept. 6, 1891	17	

Engineer Division—12 members—Annual Examination, June, 1895.

Sea service.		Order of merit in—										Number of demerits.	Order of annual merit.
Months.	Days.	Naval construction.	Designing machinery.	Marine engines.	Bollers.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Efficiency.	Conduct.		
4	17	2	1	2	2	1	2	3	6	2	1	19	* 2
5	15	11	11	9	11	10	12	11	7	11	11	105	11
5	15	10	12	12	12	10	7	12	10	12	12	149	12
4	17	8	5	4	5	8	8	7	5	6	5	46	5
7	8	4	3	3	3	4	4	2	3	5	7	80	3
4	17	6	7	6	6	4	5	5	1	4	4	29	6
4	17	1	1	1	1	4	1	1	9	2	2	27	* 1
4	17	3	4	7	3	1	6	4	4	1	6	67	4
4	17	9	10	11	7	10	10	10	11	10	8	77	10
4	17	12	9	10	10	7	9	9	8	9	9	92	9
4	17	5	8	5	9	8	3	6	12	7	10	102	8
4	17	7	6	8	8	1	11	8	2	8	2	27	7

Relative Standing of the Naval Cadets of the Service

Order of annual merit.	Name.	State from which appointed.	Date of admission.
112	Bissett, Henry Overstreet.....	Maryland.....	Sept. 6 "
1	Bronson, Amon, Jr.....	Nebraska.....	Sept. 10 "
236	Burt, Charles Perry.....	Georgia.....	Sept. 6 "
229	Castleman, Kenneth Galleher.....	Kentucky.....	Sept. 6 "
18	Cluverius, Wat Tyler, Jr.....	Louisiana.....	May 29 1877
4	Craven, Thomas Tingey.....	New Hampshire.....	Sept. 1 "
225	Crenshaw, Arthur.....	Alabama.....	Sept. 6 "
24	Curtis, Roland Irvin.....	Pennsylvania.....	Sept. 6 "
5	Doak, Henry Melville, Jr.....	Tennessee.....	Sept. 6 "
9	Earle, Ralph.....	Massachusetts.....	Sept. 6 "
19	Ellis, Mark Saint Clair.....	Arkansas.....	July 1 "
114	Fitzgerald, Edward Thomas.....	Texas.....	Sept. 12 77
28	Gilpin, Charles Edward.....	Michigan.....	Sept. 6 "
5	Hauenstein, George Jacob.....	Mississippi.....	Sept. 6 "
236	Henry, James Buchanan, Jr.....	New York.....	Sept. 6 "
2	Holden, Jonas Hannibal.....	Vermont.....	May 20 77
27	Jacop, Earl Percy.....	West Virginia.....	Sept. 6 1877
Pa	Jones, Junius Henry.....	Virginia.....	Sept. 1 "
6	Kalbach, Andrew Edwin.....	Pennsylvania.....	July 1 77
17	Kearney, Thomas Albert.....	Missouri.....	Sept. 6 "
16	Kimball, Henry Swift.....	Massachusetts.....	Sept. 6 77
25	Knox, Dudley Wright.....	Tennessee.....	Sept. 6 "
23	Leiper, Charles Lewis.....	Pennsylvania.....	Sept. 6 "
27	Lincoln, Gatewood Sanders.....	Missouri.....	May 27 77
231	Littlefield, William Lord.....	Massachusetts.....	Sept. 20 77
24	MacArthur, Arthur, Jr., Jr.....	Wisconsin.....	Sept. 6 "
20	McCauley, Edward, Jr.....	New York.....	Oct. 1 77
230	Marshall, Albert Ware.....	Texas.....	Sept. 6 "
271	Middleton, George Izard.....	South Carolina.....	Sept. 6 "
32	Mustin, Henry Croakey.....	Tennessee.....	Sept. 6 77
22	Palmer, Leigh Carlyle.....	Missouri.....	Sept. 6 77
6	Poor, Charles Longstreet.....	New York.....	Sept. 6 "
21	Rice, George Benjamin.....	Kentucky.....	Sept. 6 "
23	Ridgely, Frank Eugene.....	At large.....	Sept. 6 77
1	Robinson, Richard Hallett.....	Ohio.....	Sept. 6 "
1	Ross, John Halley.....	New York.....	Sept. 6 "
11	Toser, Charles Mayson.....	New York.....	Sept. 10 77
5	Walker, Ralph Eric.....	Indiana.....	May 20 77
23	Washington, Pope.....	North Carolina.....	Sept. 7 "
15	Wettengel, Ivan Cyrus.....	Colorado.....	Sept. 6 "
11	Wood, Duncan Mahon.....	Alabama.....	Sept. 6 77
20	Wurtsbaugh, Daniel Willert.....	Texas.....	Mar. 20 77

Class—42 members—Annual Examination, June, 1895.

Age at date of admission.		Order of merit in—											Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Efficiency.	Conduct.			
19	10	28	8	24	33	9	6	7	36	27	8	49	e12	
16	0	36	37	40	42	18	34	34	38	42	42	199	f	
17	2	15	24	22	12	33	25	21	24	27	26	89	e26	
16	5	32	26	37	14	35	9	18	17	6	40	153	e29	
17	4	20	15	15	30	20	10	14	38	31	27	80	18	
19	2	1	13	7	5	3	14	16	6	3	17	63	4	
17	6	39	41	37	26	35	39	40	40	14	12	61	e35	
18	3	30	35	27	41	23	31	41	30	41	37	144	34	
17	3	41	31	41	35	40	36	38	42	36	32	108	§	
18	4	10	10	4	35	12	10	14	6	23	8	47	0	
19	3	24	22	18	12	16	23	17	20	38	22	72	19	
17	11	9	14	7	9	15	18	28	12	19	12	57	e14	
19	9	22	40	30	18	27	38	1	10	8	15	58	28	
16	11	34	37	39	33	40	40	31	32	40	16	64	§	
16	8	34	33	35	30	38	32	38	35	39	36	137	e36	
19	1	1	5	2	1	11	7	19	2	1	1	19	2	
19	0	16	25	28	18	27	27	26	34	25	10	54	27	
18	2	(a)	(a)	(a)	23	(a)	(a)	(a)	17	23	2	26	Pa.	
19	10	22	6	14	9	4	4	12	21	7	7	50	8	
17	6	17	18	16	6	30	18	20	16	5	4	37	17	
18	7	14	18	19	3	24	18	11	13	2	21	70	16	
15	2	21	26	30	24	26	23	33	5	25	6	49	25	
16	6	3	10	3	14	5	2	3	4	14	22	71	e3	
16	9	4	9	9	14	6	3	10	37	13	24	71	e7	
18	9	33	36	30	2	25	27	27	9	14	39	170	e31	
16	3	30	17	26	20	16	18	28	14	29	30	88	24	
17	1	27	26	29	38	32	33	23	28	10	24	76	30	
18	5	25	18	19	26	19	17	37	20	18	11	55	e20	
17	7	28	21	21	8	27	26	6	21	36	17	65	P21	
18	7	19	30	25	39	35	30	30	1	33	41	170	32	
19	7	18	29	13	9	21	20	12	15	8	33	110	22	
18	11	6	3	4	26	8	8	2	17	11	12	60	6	
19	4	40	39	34	24	33	40	34	41	35	38	154	f	
17	2	26	22	17	14	21	22	9	31	22	34	108	23	
17	5	8	1	1	7	1	1	4	8	3	5	41	*1	
15	4	36	31	33	30	39	35	21	33	20	35	132	e†	
16	2	17	4	12	20	10	16	24	23	14	20	65	11	
15	8	11	2	6	26	2	5	4	11	21	31	97	5	
19	11	38	34	35	35	31	37	36	28	33	29	86	e33	
16	3	4	6	11	20	14	13	8	26	29	28	81	15	
15	11	6	16	10	39	13	14	31	3	31	17	63	13	
19	3	12	12	23	3	7	12	24	26	11	3	36	10	

Relative Standing of the Naval Cadets of the Thirtieth

Order of annual merit.	Name.	State from which appointed.	Date of admission.
34	Anding, Sheldon Webb.....	Mississippi.....	May 19 1901
36	Asserson, William Christian.....	New York.....	Sept 22 1901
37	Bagby, Robert Coleman.....	Missouri.....	Sept 22 1901
19	Boyd, David French, Jr.....	Alabama.....	May 19 1901
55	Bryant, Samuel Woods.....	Pennsylvania.....	May 19 1901
9	Chase, Gilbert.....	Virginia.....	Sept 6 1901
28	Collins, Henry Lafayette.....	Pennsylvania.....	Sept 6 1901
W	Day, John Arthur.....	New York.....	May 19 1901
* 1	De Bess, William Gennell.....	Georgia.....	Sept 6 1901
50	Duncan, Oscar Dibble.....	Alabama.....	Sept 6 1901
* 2	Egbert, Ernest Frederick.....	Michigan.....	Sept 6 1901
48	Falconer, Walter Maxwell.....	Ohio.....	Sept 6 1901
44	Giles, William Pinkney.....	Texas.....	May 20 1901
16	Graeme, Joseph Wright.....	Pennsylvania.....	Sept 6 1901
41	Graham, Andrew Thomas.....	Illinois.....	Sept 6 1901
26	Hart, Thomas Charles.....	Michigan.....	May 19 1901
40	Henderson, Robert William.....	Ohio.....	Sept 22 1901
14	Hepburn, Arthur Jap.....	Pennsylvania.....	Sept 22 1901
PT	Herraden, Henry Raymond.....	Texas.....	May 19 1901
56	Hilliary, John Francis.....	Maryland.....	Sept 6 1901
71	Holman, Frederic Ralph.....	Iowa.....	May 19 1901
25	Hoopee, Edward Trimble.....	Pennsylvania.....	Sept 6 1901
12	Houston, Victor Stuart.....	South Dakota.....	Sept 22 1901
23	Jenson, Henry Norman.....	Wisconsin.....	Sept 6 1901
9	Jones, Needham Lee.....	Mississippi.....	Sept 6 1901
31	Kauts, Austin.....	Washington.....	May 19 1901
54	Keenan, Ernest Clinton.....	New York.....	Sept 6 1901
45	Kempff, Clarence Selby.....	California.....	May 19 1901
47	Landis, Irwin Franklin.....	Kansas.....	Sept 6 1901
52	Leahy, William Daniel.....	Wisconsin.....	May 19 1901
30	McCarthy, Albert Henry.....	Iowa.....	Sept 6 1901
39	Melbowell, Willis.....	Pennsylvania.....	May 19 1901
57	Magill, Samuel George, Jr.....	North Dakota.....	May 19 1901
34	Mahony, Daniel Sullivan.....	Michigan.....	Sept 6 1901
13	Miller, Cyrus Robinson.....	California.....	Sept 6 1901
46	Morse, John Wise.....	Massachusetts.....	Sept 6 1901
17	Murnu, Olin Gould.....	Ohio.....	Sept 6 1901
56	Naylor, Charles Jacob.....	Pennsylvania.....	Sept 6 1901
11	Overstreet, Luther Martin.....	Nebraska.....	Sept 6 1901
62	Owen, Alfred Crosby.....	District of Columbia.....	Sept 6 1901
51	Owens, Charles Fredsdale.....	Pennsylvania.....	Sept 6 1901
*	Perrill, Harlan Page.....	Indiana.....	Sept 6 1901
	Fowell, Joseph Wright.....	New York.....	May 19 1901

Class—60 members—Annual Examination, June, 1895.

Age at date of admission.		Order of merit in—								
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Efficiency.	Conduct.	Number of demerits.	Order of annual merit.
19	6	53	41	41	46	21	37	9	31	34
18	0	51	27	59	44	10	42	34	102	36
16	11	47	41	28	13	58	41	19	58	37
16	8	14	19	19	22	13	12	55	217	19
15	11	56	52	56	30	52	50	40	128	55
19	11	17	8	24	12	4	34	30	67	9
16	9	8	12	46	32	41	31	48	100	28
17	8	39	58	53	4	55	12	00	240	W
16	11	1	3	1	2	14	1	1	3	*1
19	1	48	50	57	57	15	59	44	148	50
17	3	2	1	12	5	2	37	23	74	*2
17	8	26	46	49	50	17	31	58	226	46
18	1	58	55	47	60	30	11	2	19	44
18	0	39	15	5	14	21	19	21	72	16
19	0	51	25	41	55	34	43	18	51	41
15	11	81	22	27	37	23	21	31	97	26
16	5	35	28	37	33	37	43	39	129	40
15	11	15	5	7	9	34	4	51	174	14
17	4	22	36	15	18	50	29	31	99	P27
19	9	53	60	57	54	40	47	34	100	56
19	2	15	31	17	23	32	37	27	85	21
17	9	6	25	50	27	12	50	57	222	25
17	2	29	48	26	1	3	12	38	122	12
17	7	34	56	40	40	23	37	11	39	33
18	9	19	10	2	3	19	22	11	38	6
19	8	29	44	28	21	48	29	16	50	31
17	8	42	56	30	41	60	58	43	137	54
18	11	58	53	45	52	28	8	21	71	45
18	2	24	30	23	45	59	55	40	131	47
18	0	41	35	37	35	51	55	49	172	52
17	8	24	37	19	46	43	12	6	27	30
18	3	31	18	30	41	53	24	27	85	39
17	9	42	47	54	59	41	57	56	212	57
19	8	10	17	4	14	54	47	52	184	24
18	11	20	2	13	10	27	34	44	135	13
18	3	60	59	41	23	44	12	19	57	48
17	4	17	31	16	37	20	17	7	30	17
17	11	57	53	60	41	55	54	42	139	58
19	10	8	14	23	58	1	9	13	42	11
18	0	35	45	23	25	39	53	47	160	42
15	3	27	43	44	46	55	60	46	145	F
18	9	4	5	9	19	38	5	7	29	
16	3	5	12	11	17	8	2	3	22	

Relative Standing of the Naval Cadets of the Third Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.
57	Pratt, Peter Lloyd.....	Illinois.....	May 1 st 1900.
10	Pressey Alfred Warren.....	Nebraska.....	May 13 1900.
15	Reynolds, William Herbert.....	Georgia.....	Sept. 1 1900.
30	Richardson, Louis Clark.....	South Carolina.....	Sept. 6 1900.
23	Roehle, Clifton Charles.....	Maryland.....	Sept. 6 1900.
22	Sargent, Leonard Rundlett.....	Minnesota.....	Sept. 6 1900.
29	Sexton, Walton Rowell.....	Illinois.....	May 13 1900.
4	Shelford, Fletcher Lamar.....	Georgia.....	Sept. 6 1900.
34	Smith, Arthur St. Clair, jr.....	Iowa.....	Sept. 6 1900.
43	Terry, Joseph Dandridge.....	Virginia.....	May 13 1900.
8	Tholeen, David Elias.....	Wisconsin.....	Sept. 6 1900.
W	Van Orden, George.....	Michigan.....	May 13 1900.
38	Webber, George.....	Arkansas.....	Sept. 6 1900.
49	Wenale, Arthur Lewis.....	Iowa.....	May 13 1900.
18	White, William Russell.....	Arizona.....	Sept. 6 1900.
22	Williams, Hilary.....	Indiana.....	Sept. 6 1900.
3	Yarnell, Harry Kevin.....	Iowa.....	Sept. 6 1900.

60 members—Annual Examination, June, 1895—Continued.

Age at date of admission.		Order of merit in—							Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Efficiency.	Conduct.		
18	5	52	51	52	27	36	45	49	163	53
19	11	12	4	17	7	15	24	37	98	10
19	4	23	29	22	19	9	17	20	77	15
18	10	13	31	25	40	28	28	5	25	20
16	0	38	21	37	37	11	0	14	45	23
17	1	21	22	6	11	48	46	31	95	22
16	8	45	19	35	35	26	9	29	88	29
17	6	3	7	7	6	17	3	10	36	*4
19	8	31	31	19	50	47	24	16	52	34
19	3	49	22	54	30	46	34	23	73	43
17	10	10	10	10	27	4	19	15	40	8
15	1	45	48	48	52	45	52	59	245	W
16	4	50	37	35	33	31	31	25	74	38
19	10	44	37	50	55	25	22	54	213	49
17	3	27	16	14	14	6	47	52	188	18
18	3	37	40	30	20	32	24	34	92	32
17	10	7	9	3	8	7	6	4	24	*3

Relative Standing of the Naval Cadets of the P—

Order of annual merit.	Name.	State from which appointed	Date of admission.
24	Abele, Clarence Arthur.....	Massachusetts.....	Sept 10
32	Applewhite, Scott Carter.....	Indiana.....	May 10
38	Arnold, William Wood.....	New Jersey.....	May 10
33	Babcock, John Franklin.....	New York.....	Sept 10
13	Boone, Charles.....	Ohio.....	Sept 10
9	Briggs, Willbur Gerheart.....	New York.....	Sept 10
31	Briggs, Zeno Everett.....	Nebraska.....	Sept 10
50	Brockway, Benjamin Little.....	South Carolina.....	Sept 10
45	Brown, George, Jr.....	At large.....	Sept 10
19	Brown, Josephus Jarvis.....	Illinois.....	Sept 10
21	Brown, Morris Hamilton.....	Indiana.....	May 10
44	Conatien, Edward Theodore.....	Pennsylvania.....	May 10
28	Cotten, Lyman Atkinson.....	North Carolina.....	Sept 10
43	Cronan, William Pigott.....	Connecticut.....	Sept 10
30	Dinger, Henry Charles.....	Wisconsin.....	May 10
22	Eason, Herman Jacob.....	Mississippi.....	May 10
39	England, William Herbert.....	Arkansas.....	Sept 10
30	Evans, Frank Taylor.....	At large.....	Sept 10
40	Faller, Guy William.....	Wisconsin.....	May 10
35	Farrin, Thomas Benjamin, Jr.....	Illinois.....	Sept 10
48	Gilmer, James Blair.....	Virginia.....	May 10
1	Graham, John Sisson.....	Colorado.....	May 10
42	Halligan, John, Jr.....	Massachusetts.....	Sept 10
43	Hand, James Alexander, Jr.....	South Dakota.....	Sept 10
1	Hanrahan, David Carlisle.....	Wisconsin.....	May 10
1	Hord, Oliver Saunders.....	Kentucky.....	May 10
50	Hunter, Charles Milton.....	Ohio.....	May 10
1	Huntington, Arthur Franklin.....	New York.....	Sept 10
37	Johnson, Thomas Lee.....	Kansas.....	May 10
1	Kress, James Chatham.....	Pennsylvania.....	Sept 10
1	Lehfeldt, Henry August.....	Wisconsin.....	May 10
16	Love, James Monroe, Jr.....	Virginia.....	Sept 10
11	McIntyre, Edward William.....	California.....	Sept 10
24	May, Ulysses Samuel.....	Missouri.....	Sept 10
46	Madison, Zachariah Harvey.....	Illinois.....	Sept 10
37	Mannix, Daniel Pratt.....	Ohio.....	Sept 10
21	Marble, Ralph Norris, Jr.....	Minnesota.....	May 10
25	MitCHELL, Alexander Nelsy.....	Ohio.....	Sept 10
36	Nelson, Charles Preston.....	Massachusetts.....	May 10
41	Peterson, Rowen Lloyd.....	Michigan.....	June 10
10	Pottengill, George Edford.....	Idaho, at large.....	Sept 10
15	Pinney, Frank Lucius.....	Connecticut.....	Sept 10

Class—60 members—Annual Examination, June, 1895.

Age at date of admission.		Order of merit in—					Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Efficiency.	Conduct.		
17	10	22	15	29	51	43	87	24
18	4	52	44	57	52	31	62	52
17	7	36	39	39	3	13	45	38
15	0	48	49	52	45	51	119	53
17	11	10	19	17	8	10	33	13
18	7	13	10	14	27	1	6	9
17	11	27	27	40	17	7	25	31
18	9	47	56	47	33	24	54	50
18	1	48	57	42	1	3	8	45
16	7	23	13	18	24	44	93	19
17	6	23	21	12	36	24	55	21
18	6	42	43	54	36	4	24	44
19	8	14	20	56	6	7	25	26
15	7	45	47	38	41	21	51	43
18	2	17	14	27	57	27	58	20
18	4	30	27	13	41	27	59	22
17	10	55	22	36	50	42	85	39
18	11	33	39	8	20	53	128	80
16	1	29	46	49	49	35	70	40
17	7	45	24	28	45	17	47	35
18	2	53	39	51	27	13	45	48
19	1	56	42	57	20	41	82	†
18	3	2	2	3	20	18	49	*2
18	11	4	4	7	27	13	44	*3
18	9	57	57	57	20	54	133	†
18	3	53	54	60	52	60	192	†
19	8	40	50	43	60	59	154	50
17	6	58	55	53	57	57	143	†
19	1	35	27	33	17	23	52	33
17	3	30	38	20	24	50	109	34
18	5	58	33	32	27	52	126	†
10	6	15	23	25	3	12	40	16
17	6	11	7	24	55	13	44	11
17	8	25	26	33	45	24	55	28
17	8	39	48	46	49	47	102	46
16	0	41	30	23	11	36	73	32
15	2	8	33	40	11	36	73	23
18	11	32	18	29	45	11	39	25
17	3	34	50	22	5	39	80	36
17	10	38	59	31	8	49	102	41
16	10	16	5	8	27	58	153	
19	9	9	30	20	15	33	66	

Relative Standing of the Naval Cadets of the Four

Order of annual merit.			
	Name.	State from which appointed.	Date of admission.
37	Purse, Henry Ashby.....	Georgia.....	Sept. 4 : 00
42	Roper, Walter Gordon.....	Georgia.....	Sept. 22 : 00
14	Rutledge, Carl Clyde.....	Ohio.....	May 10 : 00
47	Schofield, John Anderson.....	Missouri.....	Sept. 4 : 00
5	Shane, Louis.....	Nebraska.....	Sept. 4 : 00
9	Shockley, Augustus Wroten.....	Kansas.....	May 11 : 00
12	Smith, George Leonard.....	New Hampshire.....	Sept. 4 : 00
34	Sweet, George Cook.....	New York.....	Sept. 22 : 00
28	Tardy, Walter Benjamin.....	Arkansas.....	May 10 : 00
8	Tarrant, William Theodore.....	Texas.....	Sept. 4 : 00
18	Taylor, Hugh Kirkpatrick.....	Ohio.....	Sept. 22 : 00
49	Thorpe, George Cyrus.....	Minnesota.....	May 10 : 00
* 4	Watts, William Carleton.....	Pennsylvania.....	Sept. 22 : 00
27	Wells, William Benedict.....	Iowa.....	May 10 : 00
7	Williams, Henry.....	Maryland.....	Sept. 4 : 00
17	Williams, Yancey Sullivan.....	South Carolina.....	Sept. 4 : 00
6	Woods, Edward.....	Massachusetts.....	May 10 : 00
* 1	Wright, Henry Tutwiler.....	Alabama.....	Sept. 4 : 00

Class—60 members—Annual Examination, June, 1895—Continued.

Age at date of admission.		Order of merit in—						Number of demerits.	Order of merit.
Years.	Months.	Algebra and geometry.	English and history.	French, Spanish, and German.	Efficiency.	Conduct.			
16	5	48	37	19	56	9	28	37	
18	11	21	44	50	17	56	141	42	
17	7	43	8	4	11	18	49	14	
18	6	36	53	54	33	32	65	47	
17	4	17	16	1	41	45	96	5	
19	11	60	35	36	11	38	75	5	
18	0	5	24	11	15	27	59	12	
17	3	48	60	48	41	55	138	54	
18	11	26	12	44	24	33	67	28	
16	1	19	6	5	52	30	60	8	
19	7	27	17	14	10	6	22	18	
19	4	44	50	44	36	47	102	49	
15	8	6	3	6	36	39	80	* 4	
17	4	20	32	33	40	21	50	27	
17	0	1	11	25	33	18	49	7	
18	4	11	36	14	27	5	20	17	
18	6	6	8	10	2	46	99	6	
19	8	3	1	1	6	2	10	* 1	

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

October 4, 1894, to October 3, 1895.

APPOINTED ENSIGNS JULY 1, 1895.

Naval Cadet Powelson, Wilfrid Van Nest.....	Class of 1-
Naval Cadet Montgomery, William Slack.....	Class of 1-
Naval Cadet Clark, Frank Hodges, jr.....	Class of 1-
Naval Cadet Ward, Henry Heber.....	Class of 1-
Naval Cadet Bisset, Eugene Leo.....	Class of 1-
Naval Cadet Lang, Charles Jonas.....	Class of 1-
Naval Cadet Campbell, Edward Hale.....	Class of 1-
Naval Cadet Crosley, Walter Selwyn.....	Class of 1-
Naval Cadet Gise, William Kern.....	Class of 1-
Naval Cadet Wilson, Thomas Sheldon.....	Class of 1-
Naval Cadet Pearson, Henry Allen.....	Class of 1-
Naval Cadet Jackson, Orton Porter.....	Class of 1-
Naval Cadet Chadwick, Frank Laird.....	Class of 1-
Naval Cadet Doddridge, John Selon.....	Class of 1-
Naval Cadet Olmsted, Percy Napier.....	Class of 1-
Naval Cadet Fewel, Christopher Catron.....	Class of 1-
Naval Cadet Upham, Frank Brooks.....	Class of 1-
Naval Cadet Sticht, John Low.....	Class of 1-
Naval Cadet Douglas, Richard Spencer.....	Class of 1-
Naval Cadet McKethan, Alfred Augustus.....	Class of 1-
Naval Cadet Pratt, Alfred Allen.....	Class of 1-

APPOINTED ASSISTANT ENGINEERS JULY 1, 1895.

Naval Cadet Penguet, Maurice Berthold.....	Class of 1-
Naval Cadet Price, Henry Bertrand.....	Class of 1-
Naval Cadet Trench, Martin Edward.....	Class of 1-
Naval Cadet Read, Frank De Witt.....	Class of 1-
Naval Cadet Brady, John Richard.....	Class of 1-
Naval Cadet Cook, Allen Merriam.....	Class of 1-
Naval Cadet Pollock, Emmett Riddle.....	Class of 1-
Naval Cadet Procter, Andre Morton.....	Class of 1-

APPOINTED ASSISTANT NAVAL CONSTRUCTOR JULY 1, 1895.

Naval Cadet Nutting, Daniel Chaplin, Jr.....	Class of 1-
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APPOINTED SECOND LIEUTENANT U. S. MARINE CORPS, JULY 1, 1895.

Naval Cadet Magill, Louis John.....	Class of 1-
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HONORARILY DISCHARGED JUNE 30, 1895.

Naval Cadet Elder, Edwin Avery.....	Class of 1-
Naval Cadet Perry, Joseph Albert.....	Class of 1-
Naval Cadet Berry, David Mark.....	Class of 1-
Naval Cadet Powell, William Glasgow.....	Class of 1-

*At own request.

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS. 49

Naval Cadet Ryan, John Paul Joseph.....	Class of 1893
Naval Cadet Holsinger, Gerald Long.....	Class of 1893
Naval Cadet Morris, John Ramsay.....	Class of 1893
Naval Cadet Wells, Chester.....	Class of 1893
Naval Cadet Potter, James Boyd.....	Class of 1893

RESIGNED.

Naval Cadet Bynum, Dixon H., fourth class.....	Oct. 29, 1894
Naval Cadet Deane, Russell A., second class.....	Dec. 18, 1894
Naval Cadet Shay, Louis B., fourth class.....	Dec. 20, 1894
Naval Cadet Webber, Charles H., fourth class.....	Dec. 26, 1894
Naval Cadet Jeffries, James G., fourth class.....	Dec. 28, 1894
Naval Cadet Eisbein, Arthur, fourth class.....	Jan. 4, 1895
Naval Cadet Volkmar, Walter S., second class.....	Jan. 5, 1895
Naval Cadet Caffery, John M., fourth class.....	Jan. 7, 1895
Naval Cadet Mayo, Henry W., third class.....	Jan. 12, 1895
Naval Cadet Pattison, Dilly N., third class.....	Jan. 14, 1895
Naval Cadet Small, Jesse M., fourth class.....	Jan. 17, 1895
Naval Cadet Reifsnider, John, fourth class.....	Jan. 23, 1895
Naval Cadet Ball, William G., fourth class.....	Jan. 24, 1895
Naval Cadet Stogedill, James E., fourth class.....	Jan. 24, 1895
Naval Cadet Field, Francis L., fourth class.....	Jan. 29, 1895
Naval Cadet Blandy, Edwin C., second class.....	Feb. 4, 1895
Naval Cadet Morris, Bennie, fourth class.....	Feb. 5, 1895
Naval Cadet Cooke, Robert P. P., second class.....	Feb. 14, 1895
Naval Cadet McConnell, Richard G., second class.....	Feb. 14, 1895
Naval Cadet Bonnaffon, Sylvester, fourth class.....	Feb. 19, 1895
Naval Cadet McMullen, Stanley H., third class.....	Feb. 26, 1895
Naval Cadet Shelton, Nathan J., third class.....	Feb. 26, 1895
Naval Cadet Sykes, Eugene O., jr., third class.....	Feb. 26, 1895
Naval Cadet Ward, Joshua T., third class.....	Feb. 26, 1895
Naval Cadet Bissell, Henry H., fourth class.....	Feb. 26, 1895
Naval Cadet Durham, Raymond E., fourth class.....	Feb. 26, 1895
Naval Cadet Fox, Linn H., fourth class.....	Feb. 26, 1895
Naval Cadet McCarty, Sterling H., fourth class.....	Feb. 26, 1895
Naval Cadet Moore, William A., fourth class.....	Feb. 26, 1895
Naval Cadet Sayles, William R., jr., fourth class.....	Feb. 26, 1895
Naval Cadet Tottenham, John W., fourth class.....	Feb. 26, 1895
Naval Cadet Turner, Laurin H., fourth class.....	Feb. 26, 1895
Naval Cadet Wilcox, Luther T., fourth class.....	Feb. 26, 1895
Naval Cadet Wells, Horace T., third class.....	Feb. 26, 1895
Naval Cadet Dennett, Stanley P., first class.....	Feb. 27, 1895
Naval Cadet Izard, Walter B., first class.....	Feb. 28, 1895
Naval Cadet Gleason, Henry Miller, fourth class.....	April 24, 1895
Naval Cadet Carver, Marvin, class of 1893.....	June 14, 1895
Naval Cadet Middleton, George I., second class.....	June 14, 1895
Naval Cadet Doak, Henry M., second class.....	June 26, 1895
Naval Cadet Hauenstein, George J., second class.....	June 26, 1895
Naval Cadet Shockley, Augustus W., fourth class.....	June 26, 1895
Naval Cadet Sayers, Joseph D., jr., first class.....	June 30, 1895
Naval Cadet Vestal, Samuel C., first class.....	June 30, 1895
Naval Cadet Herndon, Henry R., second class.....	Oct. 1, 1895
Naval Cadet Jones, Junius H., first class.....	Oct. 3, 1895

WITHDRAWN.

Naval Cadet Takasaki, Motohiko, first class.....	Mar. 13, 1895
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DROPPED.

Naval Cadet Mann, George H., first class.....	Mar. 16, 18
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MERIT ROLLS FOR 1894-'95.

Merit rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 91, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets that take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent of the multiple in any year shall be distinguished by a star affixed to their names on the merit rolls." (Regulations U. S. Naval Academy, ¶ 100.)

The diplomas of cadets whose final marks on the graduating merit roll are not less than 85 per cent of the maximum read "passed with distinction;" those whose final marks are between 74 per cent and 85 per cent of the maximum read "passed with credit;" and those whose final marks are between 62½ per cent and 74 per cent of the maximum read "passed."

P Physically disqualified for the naval service.

* Received 85 per cent of the multiple.

† Found deficient, allowed a reexamination, passed, and continued with class.

‡ At own request.

§ Found deficient, and recommended to be dropped.

¶ Resigned June 14, 1896.

¶ Resigned June 30, 1895.

a Absent from examination.

e Selected for engineer division.

w Found deficient, warned.

Merit roll of the Graduating Class of Naval Cadets—Line Division—85 members—at conclusion of Six Years' Course, June, 1895.

Order of merit.	NAME.	ASSIGNMENT											
		Seamanship and naval construction.	Ordnance and gun- nery.	Navigation and sur- veying.	Steam machinery, engines, and boilers.	International law.	French, Spanish, and German.	Cruise reports.	Navigation note book, journals, and station bills.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.	
	Maxima	56	44	44	20	24	28	16	8	240	760	1,000	
1*	Wilfrid Van Nest Powelson	47.46	41.25	37.95	18.40	20.04	24.43	14.72	7.40	209.65	679.31	888.96	Ensign.
2*	William Slack Montgomery	43.82	36.19	40.37	14.65	21.84	21.28	14.40	7.60	200.21	674.83	875.04	Ensign.
3	Edwin Avery Elder	40.18	27.94	36.30	12.60	18.02	20.79	13.76	6.54	174.13	687.01	831.14	Honorably discharged.
4	Frank Hodges Clark, Jr.	43.82	36.96	33.44	12.00	18.00	21.77	15.52	6.66	188.17	640.04	828.21	Ensign.
5	Henry Heber Ward	43.12	36.63	36.08	14.65	19.44	22.96	13.92	6.00	192.80	629.93	822.73	Ensign.
6	Joseph Albert Perry	48.02	36.08	36.74	16.85	19.14	19.46	14.24	7.60	198.13	621.91	820.04	Honorably discharged.;
7	Eugene Leo Bisset	41.86	35.42	33.77	12.70	21.84	23.59	10.88	5.66	185.72	620.74	806.46	Ensign.
8	Edward Hale Campbell	41.72	33.99	38.61	14.80	17.22	21.42	10.72	6.06	184.54	607.86	792.40	Ensign.
9	Charles Jonas Lang	41.72	31.79	31.24	13.85	18.30	24.33	12.72	5.40	179.85	608.72	788.07	Ensign.
10	David Mark Berry	45.22	32.12	33.77	13.60	19.50	20.51	14.32	7.40	186.44	599.67	788.11	Honorably discharged.;
11	Walter Selwyn Croaley	43.96	31.57	25.41	11.20	15.06	20.96	13.76	7.00	166.58	614.33	790.91	Ensign.
12	William Kern Gise	43.96	30.91	32.01	14.50	19.74	26.18	13.92	5.60	186.82	583.68	770.50	Ensign.
13	Thomas Sheldon Wilson	40.88	32.67	31.57	15.45	18.72	19.18	13.92	6.00	178.39	587.98	766.37	Ensign.
14	Henry Allen Pearson	42.56	29.26	32.89	11.30	19.38	21.56	13.92	5.94	176.81	584.66	761.47	Ensign.
15	Orton Porter Jackson	43.26	34.10	31.02	13.85	19.44	22.33	13.92	6.20	184.12	574.93	759.05	Ensign.
16	Allen Merriam Cook	42.56	32.78	30.47	14.25	16.50	19.39	13.92	6.06	175.93	582.54	758.47	Assistant Engineer.
17	Frank Laird Chadwick	41.44	32.01	33.22	10.85	18.36	21.84	14.16	6.74	178.62	577.98	756.00	Ensign.
18	Louis John Magill	37.66	25.08	21.78	6.95	15.12	23.50	14.40	7.00	151.58	603.89	755.47	Second Lieutenant, U. S. M. C.
19	John Schon Doddridge	41.16	29.15	28.04	13.70	15.00	19.18	14.24	6.40	167.87	586.75	754.62	Ensign.
20	Percy Napier Olmstead	42.84	28.27	26.84	12.50	20.40	19.60	13.92	6.54	170.91	575.52	746.43	Ensign.
21	Christopher Catron Fewel	40.74	28.70	27.28	11.60	18.60	20.51	10.88	5.28	164.57	575.95	740.52	Ensign.

Merit roll of the Graduating Class of Naval Cadets—Engineer Division—6 members—at conclusion of Six Years' Course, June, 1895.

Order of merit.	NAME.	ASSIGNMENT.									
		Naval construction.	Marine engines.	Designing machinery.	Boilers.	French, Spanish, and German.	Cruise reports.	Journals and station bills.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.
	Maximo.....	32	72	36	40	26	16	16	240	760	1,000
1	Maurice Berthold Peugeot.....	23.92	62.82	25.38	32.00	27.86	14.08	14.80	200.86	612.42	813.28
2	Henry Bertrand Price.....	27.04	54.54	27.45	29.50	23.73	14.08	16.00	192.34	589.38	781.72
3	Martin Edward Trench.....	24.06	59.22	30.51	30.80	19.95	14.16	14.92	194.52	598.03	790.55
4	Frank De Witt Read.....	23.44	60.84	27.18	33.40	21.84	14.16	16.00	196.86	590.22	757.08
5	John Richard Brady.....	25.12	52.56	30.06	25.80	20.51	12.52	13.44	180.01	565.22	745.23
	Daniel Chaplin Nutting, Jr.....	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	601.53	

NOTE.—Naval Cadet Daniel Chaplin Nutting, Jr., appointed assistant constructor, did not appear at the final graduating examination.

Merit roll for the four years ending June, 1894, of the Naval Cadets of the Class appointed in 1890, now performing required service afloat—Line Division—54 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima.....	76	152	228	304	760
*1	William P. Robert.....	69.78	141.49	204.90	277.36	693.53
*2	Daniel H. Cox.....	68.79	138.06	202.24	282.73	691.82
*3	Iris Van G. Gillis.....	66.37	132.75	198.06	273.43	670.61
*4	Thomas G. Roberts.....	70.31	138.61	196.60	266.79	672.31
*5	David F. Sellers.....	65.04	131.28	197.58	252.86	646.76
*6	Lawrence S. Adams.....	59.82	128.59	194.96	262.10	645.47
7	Raymond Stone.....	66.92	132.41	194.83	264.53	658.69
8	John T. Tompkins.....	67.89	135.17	189.90	256.43	649.39
9	Ridley McLean.....	67.23	129.62	192.29	251.36	640.50
10	Charles Webster.....	65.20	125.67	188.74	261.90	641.51
11	Provenat Rabin.....	64.73	130.86	185.72	244.06	625.37
12	L. Burton Jones.....	64.37	129.39	167.38	246.40	607.54
13	Simon P. Fullinwider.....	62.72	127.42	179.17	235.16	604.47
14	Stephen V. Graham.....	63.12	123.69	169.13	237.22	593.16
15	Ernest L. Bennett.....	63.66	134.29	171.16	231.43	599.54
16	John McC Luby.....	60.04	117.41	171.73	235.83	585.01
17	Fritz L. Sandos.....	65.48	122.18	169.39	227.39	584.44
18	Gilbert S. Galbraith.....	56.09	121.30	170.14	232.98	580.51
19	Melville J. Shaw.....	66.87	125.11	162.19	229.66	583.83
20	Arthur G. Kavanagh.....	62.27	118.61	173.38	217.56	571.82
21	Charles S. Bookwalter.....	57.60	118.60	169.74	229.43	575.37
22	William P. Scott.....	57.59	113.36	160.72	234.73	566.40
23	Carlton F. Snow.....	55.44	112.31	167.71	234.72	569.18
24	Robert H. Osborn.....	59.01	118.95	165.99	228.15	572.10
25	Roscoe Spear.....	61.07	119.08	168.34	226.74	575.23
26	Walter J. Manson.....	66.12	116.27	164.18	217.39	564.96
27	Robert W. McNeely.....	59.65	115.88	167.23	236.35	569.11
28	Walter S. Turpin.....	54.68	112.56	163.34	230.66	561.24
29	Roscoe C. Bulmer.....	54.09	115.09	160.52	227.29	556.99
30	William S. Whitted.....	57.31	113.02	166.56	223.65	560.54
31	George L. P. Stone.....	54.54	113.50	168.55	224.19	561.18
32	George E. Helm.....	52.68	113.06	163.89	221.39	550.02
33	Clarence England.....	54.85	106.69	154.69	218.79	535.02

Merit roll for the four years ending June, 1894, of the Naval Cadets of the Class appointed in 1890, now performing required service afloat—Engineer Division—13 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima.....	76	152	228	304	760
1	John M. Hudgins.....	61.95	128.30	186.23	251.42	627.90
2	Boling K. McMorris.....	61.06	121.17	174.23	244.80	601.26
3	Alfred W. Hinds.....	61.50	123.08	171.57	231.99	588.14
4	Roscoe C. Moody.....	58.60	118.52	172.62	238.28	588.02
5	Ignatius T. Cooper.....	62.31	119.44	166.80	232.10	580.65
6	Henry T. Baker.....	57.50	122.57	168.53	231.25	579.85
7	Ralph H. Chappell.....	56.40	115.43	171.26	236.17	579.26
8	Leland F. James.....	61.15	119.63	162.45	235.48	578.71
9	Frank Lyon.....	56.45	111.45	166.43	228.81	563.14
10	Joseph M. Reeves.....	55.29	118.73	170.74	217.17	561.93
11	Hutch I. Cone.....	59.13	115.75	161.42	222.91	559.21
12	Emory Winship.....	58.84	114.78	159.00	220.79	553.41
13	Edwin H. De Lany.....	53.96	99.22	150.33	208.06	511.57

Merit roll for the four years ending June, 1895, of the Naval Cadets of the Class appointed in 1891, now performing required service afloat—Line Division—29 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima.....	76	152	228	304	560
*1	Stuart F. Smith.....	71.49	139.99	206.29	288.28	606.05
*2	William G. Groesbeck.....	70.34	139.58	195.19	252.67	607.80
3	Frank H. Brumby.....	64.76	130.12	184.17	256.23	635.28
4	Frank P. Baldwin.....	60.71	127.49	187.52	256.98	632.70
5	William C. Davidson.....	63.49	125.34	179.38	264.02	622.23
6	Harria Laning.....	61.28	119.81	182.65	269.99	633.73
7	Philip M. Bannon.....	63.96	123.01	182.16	239.29	608.42
8	Arthur T. Chester.....	57.38	125.67	169.98	217.05	570.10
9	John R. Monaghan.....	61.30	118.33	175.74	262.41	617.78
10	Henry V. Butler, jr.....	59.72	116.63	178.14	242.08	596.57
11	James E. Walker.....	59.57	118.72	170.19	260.49	608.97
12	William R. Cushman.....	58.13	110.08	181.43	226.69	576.33
13	David W. Todd.....	60.79	117.21	169.79	217.68	565.47
14	James J. Raby.....	58.42	119.47	172.89	221.69	572.47
*15	Samuel C. Vestal.....	63.15	114.47	178.76	229.31	585.69
16	William H. Standley.....	56.55	114.67	175.21	214.05	560.48
17	Walter R. Gherardi.....	64.17	117.54	172.85	225.97	580.53
18	John V. Klemann.....	55.85	115.43	169.34	227.39	570.01
19	Kenneth M. Bennett.....	60.02	113.11	172.26	226.86	572.25
20	Michael J. McCormack.....	63.78	112.65	161.79	229.05	567.27
21	Worth Bagley.....	65.72	121.77	162.29	216.21	565.99
22	Albion J. Wadhams.....	54.73	111.75	174.39	224.46	565.33
23	Cassius B. Barnes.....	59.07	112.49	169.73	222.55	563.84
24	Edward H. Watson.....	64.74	112.49	164.18	219.89	561.30
25	Joseph C. Breckinridge.....	64.78	117.56	162.66	216.21	561.21
26	Orlo B. Knepper.....	56.32	111.91	165.64	226.84	560.71
27	Newt H. Hall.....	57.61	109.29	167.64	224.67	559.21
28	Rufus Z. Johnston, jr.....	53.19	107.08	164.22	222.79	547.28
*29	Joseph D. Sayara, jr.....	61.05	109.73	166.22	217.74	554.74

Merit roll for the four years ending June, 1895, of the Naval Cadets of the Class appointed in 1891, now performing required service afloat—Engineer Division—12 members.

Order of general merit for four years.	NAME.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima	76	152	228	304	760
1	Thomas M. Dick	63.50	128.26	185.88	262.09	639.73
2	Charles K. Mallory	55.21	118.78	184.15	269.71	627.85
3	Newton Mansfield	59.42	123.75	179.84	248.10	611.17
4	Daniel M. Garrison	53.93	113.89	177.48	249.56	594.86
5	Franklin D. Kars	56.23	116.85	176.57	243.20	592.85
6	James P. Morton	62.03	121.95	165.61	233.35	582.94
7	Frederick K. Freeman	53.73	107.77	166.14	243.23	570.87
8	Charles H. Walker	54.47	109.85	167.06	236.60	567.98
9	John F. Marshall, jr	58.92	112.48	156.96	222.71	551.07
10	Darwin R. Merritt	52.07	105.77	157.55	224.32	539.71
11	Edward H. Dunn	56.90	108.35	157.89	214.84	537.98
12	Ernest F. Eckhardt	53.55	104.24	161.11	209.95	528.85

Merit roll of the Naval Cadets of the First Class—Line Division—39 members—Annual Examination, June, 1896.

NAME.	Subjects.										Aggregate.
	Seamanship, naval construction, and naval tactics.	Seamanship, practical cruise.	Artillery and gunnery.	Navigation and surveying.	Navigation, practical cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Efficiency.	Conduct.
Maxima	32	8	60	48	8	20	65	16	8	32	32
1. Stuart F. Smith	44.07	7.06	53.25	40.92	7.32	17.95	17.65	14.36	6.64	28.40	30.64
2. Frank F. Baldwin	42.64	6.16	52.65	39.00	7.50	14.65	16.90	13.52	6.60	28.06	29.06
3. William C. Davidson	44.85	6.38	51.15	36.36	7.00	14.30	16.40	14.00	6.80	27.36	30.32
4. Frank H. Brumby	41.73	6.04	51.90	41.88	7.66	15.05	15.35	14.00	6.44	25.04	30.24
5. William G. Groves	42.38	6.28	51.15	40.08	7.36	15.45	16.75	13.22	5.70	26.48	27.52
6. Harris Laning	42.64	6.23	48.75	37.44	7.18	13.90	15.95	12.68	6.62	26.96	30.06
7. John R. McLaughlin	38.74	5.64	47.85	36.48	7.22	15.20	15.50	14.12	6.10	25.84	29.52
8. Henry V. Butler, Jr.	41.06	6.70	48.30	34.32	7.00	14.25	16.35	10.64	6.20	27.44	29.60
9. James E. Walker	40.82	6.40	48.00	37.32	7.12	14.45	16.15	12.24	5.96	26.40	25.60
10. William R. Cushman	40.04	6.53	48.50	36.48	6.98	15.60	14.40	12.04	6.66	26.40	26.72
11. John V. Kiermann	40.20	5.80	46.95	36.00	6.94	14.55	14.95	13.28	6.54	22.96	29.44
12. David W. Toid	41.24	6.36	45.90	35.04	7.12	12.56	14.10	12.80	6.72	26.44	28.56
13. Arthur T. Chester	40.95	6.43	46.80	33.96	7.00	14.00	14.50	11.48	6.02	24.96	26.90
14. William H. Standley	36.74	6.48	45.30	32.76	6.98	12.40	14.65	12.96	6.70	27.26	29.52
15. James J. Daly	37.31	6.44	42.80	35.52	7.08	12.80	14.75	11.84	6.10	26.24	26.72
16. Rufus Z. Johnston, Jr.	36.67	6.24	47.65	35.16	6.82	12.60	14.55	11.64	6.26	26.24	27.20
17. Cassius R. Harves	39.46	6.46	46.45	35.52	6.68	14.60	15.15	12.44	5.64	25.26	27.26
18. Philip M. Benson	39.46	6.80	42.45	32.64	6.78	12.80	14.50	11.64	5.96	28.00	29.26
19. Mirabel J. McFarquhar	37.31	6.06	47.46	36.84	6.94	12.55	13.20	12.76	6.92	24.96	31.44
20. Samuel C. Ventel	36.67	6.40	44.25	32.12	6.46	14.00	14.25	12.84	5.48	25.60	27.64
21. Kenneth M. Bennett	37.06	6.60	44.40	32.76	6.76	13.06	14.10	12.36	6.46	26.44	27.76
22. Otto B. Kappeler	37.70	5.16	45.15	33.96	6.80	12.10	14.45	11.44	6.24	24.96	27.66

23	Walter R. Gherardi.....	38.74	6.22	43.20	32.64	6.82	11.55	13.30	12.12	6.26	26.56	28.56	225.97
24	Albion J. Wadhams.....	37.96	6.08	44.55	32.88	7.04	13.25	14.50	10.76	6.50	26.48	24.88	224.88
25	Newt H. Hall.....	34.97	6.02	41.85	32.28	7.04	13.85	14.10	12.52	5.84	26.24	30.16	224.87
26	Edward H. Watson.....	36.92	6.10	43.05	31.80	6.42	12.65	12.90	13.20	5.96	25.92	24.88	219.90
27	Joseph D. Sayers, Jr.....	36.14	5.30	43.50	32.16	6.66	12.75	13.05	13.86	6.66	25.12	21.92	217.74
28	Worth Bagley.....	35.36	6.14	40.05	32.28	7.34	12.50	13.20	11.88	6.60	26.72	24.24	216.31
29	Joseph C. Brockbridge.....	34.32	6.06	39.90	30.96	7.44	13.25	13.10	14.76	6.10	25.84	24.48	216.21

Merit roll of the Naval Cadets of the First Class—Engineer Division—12 members—Annual Examination, June, 1895.

Order of annual merit.	NAME.											
		Naval construction.	Designing machinery.	Marine engines.	Boilers.	Number practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Mathematics.	Conduct.	Aggregate.
	Maxima.....	32	48	48	32	20	40	20	8	22	22	200
1	Charles E. Hallory	27.84	42.48	35.50	28.72	19.00	34.40	17.35	6.10	24.64	28.00	28.00
2	Thomas H. Dick	26.32	42.48	32.70	28.16	19.50	32.50	15.25	6.54	26.64	28.00	27.00
3	Daniel M. Garrison.....	25.36	38.48	32.00	27.60	19.00	30.00	15.00	6.84	24.16	28.00	26.00
4	Newton Mansfield	25.84	38.64	29.00	27.00	19.50	29.40	15.10	6.74	28.00	28.00	26.00
5	Frederick N. Freeman	22.72	37.08	31.70	26.08	18.75	28.70	14.30	6.06	27.00	28.24	25.25
6	Franklin D. Karns.....	23.28	35.28	30.00	25.00	19.00	29.00	14.70	7.44	26.48	28.00	25.25
7	Charles H. Walker	23.30	37.20	28.00	24.96	19.50	28.50	12.70	6.98	28.00	28.00	26.00
8	James P. Morton	23.52	34.08	30.00	24.08	18.75	30.70	14.00	5.56	26.08	28.00	25.25
9	Darwin R. Merritt	21.60	34.32	27.30	23.92	18.00	27.50	12.00	6.16	26.56	28.24	25.25
10	John F. Marshall, Jr.,	22.48	33.00	28.30	25.12	18.25	26.00	12.30	5.70	28.24	28.25	25.25
11	Edward H. Dunn.....	21.76	31.92	27.80	22.08	18.25	26.20	12.25	6.22	24.00	27.24	25.25
12	Ernest F. Eckhardt	22.40	30.12	25.70	21.04	18.25	25.30	12.30	6.04	23.00	28.00	26.00

Merit roll of the Naval Cadets of the Second Class—42 members—Annual Examination, June, 1895.

Order of annual merit.	NAME.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	Efficiency.	Conduct.	Aggregate.
		12	12	32	12	48	40	12	12	24	24	228
* 1	Richard H. Robinson.....	9.72	10.77	28.48	10.20	44.28	36.50	10.32	10.32	20.34	22.20	203.18
2	Jonas H. Holden.....	10.65	10.02	27.44	10.80	38.12	31.00	9.27	11.19	21.12	23.22	190.83
e 3	Charles L. Leiper.....	9.87	9.87	28.40	9.90	39.00	34.10	10.44	10.47	19.62	20.82	190.49
4	Thomas T. Craven.....	10.65	9.72	24.96	10.44	40.20	30.10	9.39	10.38	20.34	21.12	187.30
5	Ralph E. Walker.....	9.57	10.53	25.36	9.45	41.28	31.70	10.32	9.90	19.38	19.44	186.93
6	Charles L. Poor.....	9.75	10.23	25.84	9.45	37.44	30.70	11.01	9.24	19.74	21.42	184.82
e 7	Gatewood S. Lincoln.....	9.81	9.90	24.88	9.90	38.52	32.70	9.60	8.13	19.68	20.76	183.88
8	Andrew E. Kalbach.....	8.61	9.99	23.04	10.05	39.12	31.90	9.51	9.18	19.98	21.84	183.22
9	Ralph Earle.....	9.63	9.87	25.84	9.24	35.40	30.50	9.42	10.38	19.26	21.78	181.32
10	Daniel W. Wurtzbaugh.....	9.54	9.75	21.84	10.50	38.04	30.40	8.88	9.00	19.74	22.44	180.13
11	Charles M. Tozer.....	9.48	10.17	23.84	9.75	38.60	29.90	8.83	9.00	19.62	21.06	178.39
e 12	Henry O. Bisset.....	8.40	9.93	21.68	9.30	36.96	31.60	9.93	8.37	19.14	21.78	177.09
13	Duncan M. Wood.....	9.75	9.45	24.56	9.09	34.68	30.10	8.55	10.53	19.02	21.12	176.85
e 14	Edward T. Fitzgerald.....	9.66	9.63	24.96	10.05	33.48	29.20	8.64	9.72	19.50	21.42	176.26
15	Ivan C. Wettengel.....	9.81	9.99	24.92	9.75	34.44	30.20	9.87	8.85	19.08	20.34	176.25
16	Henry S. Kimball.....	9.42	9.33	22.48	10.50	31.56	29.20	9.54	9.63	20.94	20.94	173.54
17	Thomas A. Kearney.....	9.18	9.33	22.88	10.35	30.84	29.20	9.03	9.27	20.16	22.38	172.62
18	Wat T. Cluverius, Jr.....	8.67	9.60	22.96	9.39	32.28	30.50	9.42	8.04	19.02	20.40	170.28
19	Mark St. C. Ellis.....	8.58	9.24	22.64	9.99	32.76	28.50	9.33	9.21	18.72	20.82	169.79
e 20	Albert W. Marshall.....	8.52	9.33	22.48	9.45	32.40	29.50	8.19	8.85	19.56	21.48	169.76
P 21	George I. Middleton.....	8.40	9.27	22.40	10.14	30.96	28.30	10.06	9.18	18.78	21.12	168.63
22	Leigh C. Palmer.....	9.00	8.82	23.28	10.05	32.16	27.60	9.51	9.30	19.86	18.96	168.54
23	Frank E. Ridgely.....	8.46	9.24	22.80	9.90	32.16	29.00	9.72	8.70	19.32	18.66	167.96
24	Arthur MacArthur, Jr.....	8.37	9.39	21.36	9.75	32.76	29.20	8.04	9.42	19.06	19.86	167.83
25	Dudley W. Knox.....	8.64	8.88	20.80	9.54	31.08	28.50	8.49	10.44	19.20	21.90	167.47
e 26	Charles P. Burt.....	9.33	9.21	21.92	9.99	30.48	28.40	8.97	9.03	19.14	20.46	166.93
27	Earl P. Jessop.....	9.21	9.03	21.12	9.84	30.96	27.70	8.70	8.43	19.20	21.60	165.79
28	Charles E. Gilpin.....	8.61	7.63	20.80	9.84	30.96	25.20	11.28	10.05	19.86	21.30	165.73
e 29	Kenneth G. Castleman.....	8.28	8.88	20.24	9.90	30.24	30.60	9.30	9.24	20.10	16.50	163.28
30	Edward McCauley, Jr.....	8.43	8.88	20.96	9.21	30.60	26.80	8.94	8.79	19.80	20.76	163.17
e 31	William L. Littlefield.....	8.25	8.13	20.80	10.65	31.20	27.70	8.67	10.14	19.62	16.74	161.90
32	Henry C. Mustin.....	8.97	8.76	21.52	9.09	30.24	27.50	8.58	11.31	18.96	16.26	161.19
e 33	Pope Washington.....	7.98	8.43	20.32	9.24	30.72	25.30	8.25	8.79	18.96	20.22	158.21
34	Rowland I. Curtis.....	8.37	8.37	21.28	9.00	31.80	27.00	7.89	8.73	18.24	17.34	158.02
e 35	Arthur Crenshaw.....	7.89	7.71	20.24	9.45	30.24	25.10	8.04	7.95	19.62	21.42	157.66
e 36	James B. Henry, Jr.....	8.22	8.46	20.32	9.39	30.00	26.90	8.07	8.40	18.66	17.82	156.24
P a	Junius H. Jones.....	(a)	(a)	(a)	9.60	(a)	(a)	(a)	9.24	19.26	22.80	.....
†	John H. Roys.....	8.04	8.52	20.48	9.39	29.40	25.50	8.97	8.49	19.44	18.30	156.53
§	George J. Hauenstein.....	8.22	8.07	20.08	9.30	29.16	24.70	8.55	8.64	18.60	21.18	156.50
§	Henry M. Doak, Jr.....	7.27	8.52	19.36	9.24	29.16	25.40	8.07	7.74	18.78	19.38	153.42
e †	George B. Rice.....	7.83	8.04	20.40	9.54	30.48	24.70	8.07	7.89	18.90	17.16	153.34
†	Amos Bronson, Jr.....	8.04	8.07	19.76	8.19	32.64	26.50	8.40	8.04	17.70	14.82	152.16

Merit roll of the Naval Cadets of the Third Class—60 members—Annual Examination June, 1895.

Order of annual merit.	NAME.	Trigonometry, analytical and descriptive geometry.	Physics and chemistry.	English and law.		French, Spanish, and German.	Mechanical drawing.	Efficiency.	Conduct.	Aggregate.
		40	20	16	20	24	16	16	12	12
* 1	William G. Du Bose.....	36.40	18.10	14.96	19.30	20.46	12.96	15.92	17.76	17.76
* 2	Ernest F. Eggert.....	34.00	18.00	13.44	17.05	23.34	12.48	14.16	15.12	15.12
* 3	Harry E. Yarnell.....	32.20	16.65	14.36	17.35	22.20	13.08	15.44	16.40	16.40
* 4	Fletcher L. Shoemaker.....	34.10	17.10	13.80	17.50	20.22	13.36	15.12	16.08	16.08
* 5	Joseph W. Powell.....	33.10	16.40	13.48	16.30	21.84	13.56	15.68	16.64	16.64
6	Needham L. Jones.....	30.40	16.50	14.40	16.00	19.92	12.76	15.00	15.96	15.96
7	Harlan P. Perrill.....	33.90	17.20	13.64	16.05	17.48	13.12	15.20	16.16	16.16
8	David E. Tholen.....	31.60	16.50	13.60	14.45	22.67	12.64	14.64	15.60	15.60
9	Gilbert Chase.....	30.50	16.80	12.56	16.75	22.66	12.52	13.40	14.36	14.36
10	Alfred W. Prosser.....	31.10	17.55	12.72	17.40	20.40	12.72	13.00	13.96	13.96
11	Luther M. Overstreet.....	31.70	16.35	12.12	13.00	23.66	13.00	15.00	15.96	15.96
12	Victor S. Houston.....	27.90	14.00	12.32	19.70	23.04	12.92	13.00	13.96	13.96
13	Cyrus R. Miller.....	29.40	18.35	13.16	17.20	19.14	12.52	12.56	13.52	13.52
14	Arthur J. Hepburn.....	30.70	17.20	13.80	17.30	18.08	13.16	11.64	12.60	12.60
15	William H. Reynolds.....	28.90	15.05	12.64	16.05	21.48	12.48	14.00	14.96	14.96
16	Joseph W. Grimes.....	27.10	16.30	14.08	16.55	19.80	12.64	14.20	15.16	15.16
17	Orin G. Murfin.....	30.50	14.95	12.76	13.90	19.96	12.48	15.20	16.16	16.16
18	William R. White.....	28.20	16.15	13.04	16.55	22.26	12.16	11.60	12.56	12.56
19	David F. Boyd, Jr.....	30.80	15.75	12.68	15.80	20.70	12.62	10.44	11.40	11.40
20	Louis C. Richardson.....	31.00	14.95	12.48	13.40	19.08	12.00	15.00	15.96	15.96
21	Frederic R. Holman.....	30.70	14.95	12.72	15.65	18.24	12.48	13.92	14.88	14.88
22	Leonard R. Sargent.....	29.30	15.65	14.00	17.00	16.44	12.20	13.00	13.96	13.96
23	Clifton C. Roehle.....	27.30	15.70	11.60	12.00	21.16	13.08	14.92	15.88	15.88
24	Daniel S. Mahony.....	31.00	16.00	14.24	16.55	15.76	12.16	11.60	12.56	12.56
25	Edward T. Hoopes.....	32.50	15.30	10.92	14.45	20.46	12.12	10.20	11.16	11.16
26	Thomas C. Hart.....	27.80	15.65	12.28	13.90	19.62	12.00	12.00	12.96	12.96
27	Henry R. Herndon.....	29.00	14.60	12.96	16.15	16.32	12.64	13.00	13.96	13.96
28	Henry L. Collins.....	31.70	16.40	11.24	14.10	17.14	12.56	12.00	12.96	12.96
29	Walton R. Sexton.....	26.70	15.75	11.96	13.95	19.32	14.00	13.00	13.96	13.96
30	Albert H. McCarthy.....	26.70	14.55	12.68	13.40	16.96	12.92	15.24	16.20	16.20
31	Austin Kauts.....	27.90	14.30	12.24	15.90	16.44	12.64	16.00	16.96	16.96
32	Hilary Williams.....	27.40	14.45	12.20	15.30	16.24	12.72	13.64	14.60	14.60
33	Henry N. Jensen.....	27.70	13.40	11.76	12.05	19.62	12.48	13.00	13.96	13.96
34	Sheldon W. Anding.....	25.80	14.40	11.72	13.40	19.40	12.48	15.20	16.16	16.16
35	Arthur St. C. Smith, Jr.....	27.80	14.95	12.08	13.25	16.50	12.72	14.00	14.96	14.96
36	William C. Ascareau.....	26.00	15.25	10.72	12.55	21.34	12.40	13.64	14.60	14.60
37	Robert C. Hagby.....	26.00	14.40	12.24	14.00	15.42	12.44	14.00	14.96	14.96
38	George Webber.....	26.30	14.55	11.96	14.05	16.44	12.56	14.12	15.08	15.08
39	Willis McDowell.....	27.80	15.00	12.20	13.00	15.84	12.72	13.92	14.88	14.88
40	Robert W. Henderson.....	27.60	15.20	11.80	14.05	17.02	12.36	13.00	13.96	13.96
41	Andrew T. Graham.....	26.00	15.20	11.72	13.15	14.08	12.36	14.72	15.68	15.68
42	Alfred C. Owen.....	27.60	14.25	12.12	13.35	17.40	12.64	12.00	12.96	12.96
43	Joseph D. Terry.....	26.40	15.45	10.64	14.35	16.56	12.82	14.16	15.12	15.12
44	William F. Glue.....	25.30	12.50	11.12	12.75	19.02	12.08	13.24	14.20	14.20

Merit roll of the Naval Cadets of the Third Class—60 members—Annual Examination, June, 1895—Continued.

Order of annual merit.	NAME.	Trigonometry, analytical and descriptive geometry.	Physics and chemistry.	English and law.	French, Spanish, and German.	Mechanical drawing.	Efficiency.	Conduct.	Aggregate.
		40	20	16	20	24	16	16	152
45	Clarence S. Kempff	25.30	13.55	11.36	13.30	19.08	13.04	14.32	109.95
46	Walter M. Falconer	28.46	14.15	10.96	13.35	20.22	12.56	10.16	109.80
47	Irwin F. Landis	28.70	15.00	12.60	13.50	15.36	11.73	12.88	109.76
48	John W. Morse	25.20	12.80	11.72	15.65	16.80	12.92	14.60	109.69
49	Arthur L. Weesels	26.80	14.55	10.92	13.15	19.56	12.76	10.92	108.66
50	Oscar D. Duncan	26.50	13.95	10.40	13.10	20.40	11.60	12.56	108.51
51	Charles T. Owens	28.20	14.35	11.64	13.40	15.72	11.48	12.44	107.23
52	William D. Leahy	27.00	14.65	11.80	13.95	16.20	11.72	11.80	107.12
53	Peter L. Pratt	25.80	13.75	10.80	14.45	17.94	12.28	11.80	106.82
54	Ernest C. Keenan	26.90	13.40	12.20	13.60	15.30	11.64	12.68	105.72
55	Samuel W. Bryant	25.70	13.65	10.56	14.35	16.02	12.12	12.88	105.28
56	John F. Hilleary	25.80	12.75	10.40	13.25	17.22	12.16	13.64	105.22
57	Samuel G. Magill, jr	26.90	14.05	10.64	12.85	17.16	11.68	10.72	104.00
58	Charles J. Naylor	25.60	13.55	10.16	13.60	15.72	11.80	12.72	103.15
59	John A. Day	27.10	13.35	10.72	17.70	15.72	12.92	9.64	107.15
60	George Van Orden	26.70	14.00	11.00	13.30	16.74	12.08	9.68	103.50

*Merit roll of the Naval Cadets of the Fourth Class—60 members—Annual Examination
June, 1895.*

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Efficiency.	Conduct.	Aggregate.
		Maxima.....	20	20	20	20	20
*1	Henry T. Wright.....	18.90	18.55	19.20	6.28	7.99	88.71
*2	John Halligan, jr.....	17.15	18.35	18.30	6.16	7.52	87.08
*3	James A. Hand, jr.....	16.85	17.95	18.95	6.14	7.58	86.55
*4	William C. Watts.....	16.70	18.00	17.25	6.10	7.39	86.39
5	Louis Shane.....	15.90	15.95	19.30	6.08	7.04	85.27
6	Edward Woods.....	16.70	16.85	16.70	6.56	7.09	85.00
7	Henry Williams.....	18.25	16.50	15.40	6.12	7.52	84.99
8	William T. Tarrant.....	15.35	17.15	17.40	5.98	7.46	84.34
9	Wilbur G. Briggs.....	16.10	16.70	16.15	6.14	7.38	84.05
10	George T. Pettengill.....	15.85	17.50	16.90	6.14	6.68	83.77
11	Edward W. McIntyre.....	16.30	17.10	15.45	5.96	7.56	83.71
12	George L. Smith.....	16.75	15.40	16.50	6.22	7.42	83.59
13	Charles Boone.....	16.35	15.70	16.10	6.10	7.06	83.37
14	Carl C. Rutledge.....	13.20	16.85	17.95	6.26	7.32	83.33
15	Frank L. Pinney.....	16.55	15.15	15.00	6.22	7.34	83.16
16	James M. Love, jr.....	15.80	15.45	15.40	6.22	7.09	82.96
17	Yancey S. Williams.....	16.30	14.35	16.15	6.14	7.39	82.83
18	Hugh K. Taylor.....	14.00	15.85	16.15	6.26	7.73	82.81
19	Josephus J. Brown.....	14.80	16.35	16.00	6.16	7.06	82.53
20	Henry C. Dinger.....	15.00	16.15	15.30	5.89	7.42	82.51
21	Morris H. Brown.....	14.80	15.55	16.35	6.16	7.68	82.38
22	Herman J. Elson.....	14.35	15.25	16.25	6.08	7.42	82.31
23	Ralph N. Marble, jr.....	16.00	14.95	14.15	6.38	7.29	82.27
24	Clarence A. Able.....	14.05	16.00	15.65	6.00	7.12	82.12
25	Alexander N. Mitchell.....	14.30	15.80	15.05	6.04	7.02	82.01
26	Lyman A. Cotten.....	15.95	15.00	12.95	6.26	7.26	81.95
27	William B. Wells.....	15.10	15.00	14.90	6.20	7.56	81.82
28	Ulysses S. Macy.....	14.75	15.30	14.90	6.04	7.68	81.65
29	Walter B. Tardy.....	14.70	16.40	13.65	6.10	7.34	81.60
30	Frank T. Evans.....	14.15	14.15	16.90	6.16	6.79	81.55
31	Zeno K. Briggs.....	14.00	15.25	14.15	6.30	7.26	81.50
32	Daniel P. Mannix.....	12.65	15.15	15.00	6.28	7.29	81.47
33	Thomas L. Johnson.....	13.80	15.25	14.90	6.30	7.46	81.41
34	James C. Kress.....	14.25	14.25	15.00	6.16	6.90	81.36
35	Thomas B. Farrin, jr.....	12.95	15.40	15.15	6.04	7.34	81.30
36	Charles P. Nelson.....	12.95	17.50	15.70	6.46	7.39	81.25
37	Henry A. Purse.....	12.75	14.30	15.65	5.92	7.72	81.20
38	William W. Arnold.....	13.65	14.15	14.35	6.32	7.58	81.15
39	William H. England.....	12.50	15.50	14.80	5.98	7.14	81.00
40	Guy W. Falter.....	14.45	13.70	13.55	6.02	7.30	80.97
41	Roscoe L. Peterson.....	12.40	12.95	15.00	6.30	6.98	80.93
42	Walter G. Roper.....	15.00	12.80	12.60	6.30	6.36	80.86
43	William P. Cronan.....	12.95	12.65	14.55	6.08	7.36	80.81
44	Edward T. Consten.....	12.40	12.95	13.60	6.16	7.02	80.73

Merit roll of the Naval Cadets of the Fourth Class—60 members—Annual Examination, June, 1895—Continued.

Order of annual merit.	NAME.	Algebra and geometry.	English and history.	French, Spanish, and German.	Efficiency.	Conduct.	Aggregate.
	Maxima	20	20	20	8	8	76
45	George Brown, jr.....	12.75	13.00	14.00	6.62	7.88	54.25
46	Zachariah H. Madison.....	13.75	13.60	13.80	6.02	6.98	54.15
47	John A. Schofield.....	13.85	13.45	13.00	6.12	7.36	53.78
48	James B. Gilmer.....	12.60	14.15	13.20	6.14	7.56	53.75
49	George C. Thorpe.....	13.00	13.50	13.85	6.10	6.98	53.43
50	Benjamin L. Brockway.....	12.80	13.15	13.70	6.12	7.46	53.23
50	Charles M. Hunter.....	13.70	13.50	13.95	5.64	6.44	53.23
52	Scott C. Applewhite.....	12.65	13.80	12.75	5.98	7.38	52.56
53	John F. Babcock.....	12.75	13.55	13.25	6.04	6.80	52.39
51	George C. Sweet.....	12.75	12.00	13.60	6.06	6.60	51.91
†	Henry A. Lehfeldt.....	12.05	14.95	14.95	6.14	6.74	54.83
§	Augustus W. Shockley.....	11.55	14.75	14.60	6.26	7.26	54.62
†	John S. Graham.....	12.25	14.05	12.75	6.18	7.18	52.41
†	Arthur F. Huntington.....	12.05	13.25	13.10	5.88	6.56	50.84
†	David C. Hanrahan.....	12.15	13.00	12.75	6.18	6.66	50.74
†	Oliver S. Hord.....	12.60	13.35	12.20	5.98	6.06	50.19

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.) *Provided, however,* That there shall not be at any time more in said Academy appointed at large than ten.—(*Act of Congress approved August 5, 1882.*)

III. The course of naval cadets is six years.—(*Rev. Stat.*, § 1530.) Four years at the Naval Academy and two years at sea, at the expiration of which time the cadet returns to the Academy for final graduation, and the district then becomes vacant.

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the naval cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. *At least* fifteen appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for naval cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the fifth of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the first day of July of that year; but if it is not made by that time the Secretary of the Navy shall fill the vacancy by appointment of an actual resident of the district in which the vacancy exists, who shall have been for at least two years immediately preceding the date of his appointment an actual and bona fide resident of the district in which the vacancy exists and of the legal qualification under the law as now provided. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. *And all candidates must, at the time of their examination for admission, be between the ages of "fifteen and twenty years and physically sound, well-formed, and of robust constitution."*—(*Rev. Stat.*, § 1517.)

VII. Candidates who may be nominated in time to enable them to reach the Academy by the fifteenth of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examination.

No leave of absence will be granted to Cadets of the fourth class.

EXAMINATION.

VIII. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the Board of Examiners."—(Rev. Stat., § 1515.)

IX. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(Rev. Stat., § 1516.)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy at the Naval Academy. Any one of the following conditions will be sufficient to cause the rejection of a candidate, viz:

- Feeble constitution, inherited or acquired;
 - Retarded development;
 - Impaired general health;
 - Decided cachexia, diathesis, or predisposition;
 - Any disease, deformity, or result of injury that would impair efficiency, such as—
 - Weak or disordered intellect;
 - Cutaneous or communicable disease;
 - Unnatural curvature of spine, torticollis, or other deformity;
 - Inefficiency of either of the extremities or large articulations from any cause;
 - Epilepsy or other convulsions within five years;
 - Impaired vision, disease of the organs of vision, imperfect color sense; acuteness must not fall below fifteen-twentieths of the normal in either eye;
 - Impaired hearing or disease of the ear;
 - Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils.
 - Impediment of speech to such an extent as to impair efficiency in the performance of duty;
 - Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
 - Hernia, complete or incomplete, or undescended testis;
 - Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;
 - Disease of the genito-urinary organs;
 - Chronic ulcers, ingrowing nails, large bunions, or other deformity of feet.
 - Loss of many teeth, or teeth generally unsound.
- Attention will also be paid to the stature of the candidate, and no one under size for his age will be received at the Academy. In the case of doubt as to the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers, whether abstract or concrete, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon, and the relation between the Troy and Avoirdupois pounds, and to reduce differences of time to differences of longitude and *vice versa*.

To define prime and composite numbers; to give the test of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem that can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the use of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed, *e. g.*:

"They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what the

ought." Such a sentence must be parsed *fully*, giving the part of speech, and a case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words; thus—

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative present tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected thus—

1. *Describe the sources from which our knowledge of these events are derived.* 2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have seen him have been there and seen it.* 5. *There's a sweet little cherubim sits up aloft to keep us safe for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain-chains and the location of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they flow; the position of important seas, gulfs, and arms of the sea; the position of independent States, their boundaries and capital cities; the position and direction of great peninsulas, and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and of colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bodies of water on which cities are situated; the course of a vessel in making a voyage between well-known ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other States, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both, and questions of the general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and give their positions. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies: royal, proprietary, and charter. Name the colonies that originally existed within the present limits of Massachusetts; of Connecticut. When were these colonies united? What cities of the colony of Pennsylvania include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the *United States*, giving the names of the commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as naval cadets, and become students at the Academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz:

One dress jacket.....	\$19.50	One jackknife.....	\$0.75
One blouse.....	11.75	Six sheets.....	3.45
Two pairs trousers.....	21.00	Hammock clews.....	.58
Two working suits.....	1.90	One pair of bathing trunks.....	.20
One overcoat.....	22.50	Three pairs white thread gloves.....	.54
One rubber coat.....	4.00	Two black silk neckties.....	.40
One rubber hat.....	.60	Two clothes bags.....	.46
Two pairs of regulation leggins..	1.50	One hammock mattress.....	3.00
One parade cap.....	2.95	a One requisition book.....	.40
One knit cap.....	.66	a One pass book.....	.40
One mug.....	.10	a Stencil, ink, and brush.....	.45
One soap box.....	.65	a One bottle of indelible ink.....	.18
One laundry book.....	.34	a One wash basin and pitcher....	.88
One pair of blankets.....	2.50	a One pair of gymnasium slippers.	1.05
Two pairs of high shoes.....	7.20	* One whisk.....	.15
One pair of overshoes.....	.72	* One coarse comb.....	.10
Eight white shirts.....	4.40	* One cake of soap.....	.10
Twelve linen collars.....	1.50	* One hairbrush.....	.55
Eight pairs of cuffs.....	2.00	* Stationery.....	.50
* Eight pairs of socks.....	1.84	* Twelve white handkerchiefs....	2.40
* Eight towels.....	1.84	* One pair of suspenders.....	.40
* Shaving outfit.....	1.61	* Four suits pajamas.....	6.00
* Four pairs of drawers (winter)..	5.00	* One toothbrush.....	.20
b Four pairs of drawers (summer)..	1.60	* Thread and needles.....	.19
* Four undershirts (winter).....	5.00	* Blacking brush and blacking...	.66
b Four undershirts (summer).....	1.60	* Nailbrush.....	.30
One hand glass.....	.36		
			24.29
	124.62		

When moving into cadet quarters, cadets will supply themselves with the following articles, viz:

a Two bedspreads.....	\$2.20	One mirror.....	\$1.10
a Two pairs of drill gloves.....	1.00	a One rug.....	1.00
a One slop jar.....	.88	a One hair mattress.....	5.25
a Two spatter cloths.....	.66	a One broom.....	.29
One hair pillow.....	.75	Six pillowcases.....	1.38
	5.49		9.02

Cadets will supply themselves with the following additional articles when preparing to embark on board the practice ship, viz:

Three working suits.....	\$2.85	One pair high shoes.....	\$1.00
Four woollen shirts.....	7.40	One knit cap.....	1.00
Three white sailor hats.....	1.20		
	<hr/>		
	11.45		

Articles marked *a* will not be taken on board the practice ship.

Of the articles marked *b*, cadets entering in September must have four each.

The articles marked *c*, not being required to conform to a standard pattern, *a.* be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.

Each naval cadet must, on admission, deposit with the pay officer the sum of \$5 for which he will be credited on the books of that officer, to be expended by direction of the superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$20 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc.....	\$17.00
Deposit for books, etc.....	3.00
	<hr/>
Total amount required.....	20.00

The value of clothing brought from home is to be deducted from this amount.

Each naval cadet *one month after admission* will be credited with the amount of his actual expenses in travelling from his home to the Academy.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution; arithmetical, geometrical, and harmonical progression.	Hall and Knight's Elementary Algebra. Hall and Knight's Higher Algebra. Todhunter's Algebra.*
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Wentworth's Geometry.
<i>English.</i>	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Buehler's Practical Exercises in English.* Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greeco and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
<i>Languages.</i>	5	4	FRENCH: "Natural Method."	Chardenal's Complete French Course. Marion's Le Verbe en quatre Tableaux Synoptiques. Termes Nautiques, Portinain. Bellow's Dictionary.*

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate coefficients and the binomial theorem; permutations and combinations; theory of probability; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations; determinants.	Hall and Knight's Higher Algebra Bowditch's Calculus
	2	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Westworth's Geometry
<i>English.</i>	2	4	ENGLISH: Words, sentences, and paragraphs; exercises in the composition of letters and telegrams. Themes.	A. S. Hill's Elements of Rhetoric Bushler's Practical Exercises in English Webster's Dictionary
	3	4	HISTORY: Progress of colonial development in America, and the history of the United States; important points in the naval history of the United States, by notes or lectures.	Ellis's History of the United States Mitchell's Atlas
<i>Languages.</i>	5½	4	FRENCH: "Natural Method."	Berry's La Langue Française, 1 ^{re} partie Berry's French Reader Worman's First Spanish Book Knapp's Spanish Grammar Roemer's Dictionary
			SPANISH: "Natural Method." (Given as an advanced course.)	

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Mathematics.</i>	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections, representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order; projections of the sphere.	Church's Descriptive Geometry. Hendrickson-Dresel's Stereographic Projection. Rittenhouse's Exercises in Descriptive Geometry Drawing. Chauvenet's Trigonometry.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulae, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Levett and Davison's Plane Trigonometry. Bowditch's Useful Tables.
<i>English.</i>	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	A. S. Hill's Principles of Rhetoric. Buehler's Practical Exercises in English. Webster's Dictionary.
	2	4	LAW: The Constitution of the United States.	Andrews's Manual of the Constitution.
<i>Languages.</i>	3	4	FRENCH: "Natural Method." SPANISH: "Natural Method." (Given as an advanced course.)	Modern French Plays. Bercy's La Langue Française, 2 ^e partie. Guerres Maritimes Jurien de la Gravière. Knapp's Spanish Reader.
<i>Drawing.</i>	4	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	Fannce's Mechanical Drawing. Rittenhouse's Exercises in Descriptive Geometry. Drawing.

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics.</i>	4	4	<p>PHYSICS: An elementary course intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures.</p> <p>CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory; experiments illustrating the daily recitations and the determination of simple salts, acids, and bases. Lectures.</p>	<p>Daniell's Principles of Physics. Practical Physics by Stewart and Gee</p> <p>Romano's General Chemistry Lecture Notes.</p>
<i>Mathematics.</i>	5	4	<p>Stereographic Projections and Solutions of the "Astronomical Triangle."</p> <p>ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of coordinates; properties of the conic sections; equations to tangents and normals; determination of loci; discussion of the general equation of the second degree equations of the plane, of lines in space, and of surfaces of the second order; the principal properties of surfaces of the second order; discussion of the general equation of the second degree in three variables.</p>	<p>Hendrickson's Descriptive Stereographic Projections. C. Smith's Conic Sections.</p>
<i>English</i>	2	4	<p>ENGLISH: Classification of words, definition of words by usage and by derivation, synonyms, laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition, exercises in the composition of official dispatches, letters, and telegrams. Themes.</p>	<p>Abbott and Phelps's English Lessons for English People. Abbott's How to Write Clearly. Bushler's Practical Exercises in English. Webster's Dictionary.</p>

SECOND YEAR—THIRD CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Languages.</i>	2	4	FRENCH: Course of the first term continued. SPANISH: Course of the first term continued.	Same as for the first term.
<i>Drawing</i>	2½	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; drawing screws, bolts, nuts, and gearing; round writing. Drawing exercises in descriptive geometry, including the intersections of surfaces, development of single-curved surfaces, and problems on the surfaces of revolution.	Faunce's Mechanical Drawing. Rittenhouse's Exercises in Descriptive Geometry Drawing.

COURSE OF INSTRUCTION.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
<i>Seamanship.</i>	1	4	SEAMANSHIP: Use of the compass, lead, and log; signals; blocks and tackles; running rigging; description and use of sails and their fittings, purchasing weights; boats and their management; ground tackle; handling at anchor; handling sails; port drills and evolutions; management under sail; duties of naval cadets; rules of the road.	Luce's <i>Seamanship</i> ; Department <i>SEAMANSHIP</i>
<i>Steam Engineering.</i>	3	4	PRINCIPLES OF MECHANISM. Marine engines and boilers. Properties of heat and its application to water; combustion; laws and properties of steam; types of marine boilers; comparative efficiency; names and uses of their attachments; hydrometers; scale and its prevention; types of marine engines, including condensers and pumps, with explanation of the use of all the parts; screw propellers and paddle wheels; the indicator and its diagrams; power of the engine and computations relating thereto; casualties; care and management of steam machinery.	Goodeve's <i>Elements of Mechanism</i> Gow's <i>Notes and Problems in Elementary Mechanism</i>
<i>Mechanics.</i>	5	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series, maxima and minima; geometrical applications, functions of two or more variables.	Rice and Johnson's <i>Differential Calculus</i>
	5	2	INTEGRAL CALCULUS: The methods of integration, definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves, centers of gravity; moments of inertia, plane meters; rules for the approximate determination of areas and volumes.	Johnson's <i>Integral Calculus</i>

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics.</i>	4	4	<p>PHYSICS: Recitations on simple harmonic motion; wave motions, sound, light, and heat. Practical work in the physical laboratory; experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses; length of light waves. Photography.</p> <p>CHEMISTRY: Short course in chemical analysis.</p>	<p>Daniell's Principles of Physics. Ganot's Physics. Stewart's Treatise on Heat. Practical Physics, by Stewart and Geo. Kohlrausch's Physical Measurements. Lecture Notes.</p> <p>Stoddard's Outline of Qualitative Analysis for Beginners.</p>
<i>English.</i>	1	4	HISTORY: The history of the United States Navy.	Maclay's History of the Navy.
<i>Languages.</i>	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Jurien de la Gravière's <i>Guerres Maritimes</i> .
<i>Drawing.</i>	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings; isometrical drawing.	Tomkin's Machine Construction.* Fausse's Mechanical Drawing.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship.</i>	1	4	Course of the first term continued.	Same as for the first term.
<i>Navigation.</i>	2	4	THE CELESTIAL SPHERE: Spherical and rectangular coördinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac. Dead reckoning and "day's work."	White's Astronomy; Bowditch's Navigation; American Ephemeris and Nautical Almanac.
<i>Steam Engineering.</i>	3	4	MARINE ENGINES: Early history and progress of marine engineering; work and efficiency; nature and properties of heat; application of heat to water; combustion of coal and economy of fuel; arrangement and efficiency of boilers; fittings and mountings of boilers; corrosion and preservation of boilers; efficiency of the steam; methods of increasing the expansive efficiency of steam; compound engines; condensation of steam; regulating and expansion valves and gear; slide valves and fittings; starting and reversing gears; cylinders and their fittings; condensers and fittings; rotatory motion; details of compound and triple expansion engines; propulsion, screw-propellers; the indicator and indicator diagrams, auxiliary machinery and fittings.	Seaton's Marine Engine; Marine Engines; Foulme's Notes on Steamships, 1884.
<i>Mechanics.</i>	5	4	MECHANICS: Kinematics, dynamics, statics, hydromechanics, the motion of projectiles, friction and other resistances, the application of mechanical principles to simple machines and to instruments.	Ziegler's Mechanics; Bowser's Hydraulics.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Physics.</i>	4	4	<p>PHYSICS: Recitations in light and heat concluded.</p> <p>Electricity and magnetism commenced.</p> <p>Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.</p>	<p>Same as for the first term.</p> <p>Thompson's Electricity and Magnetism.</p> <p>Ayrton's Practical Electricity.</p> <p>Day's Exercises in Electrical Measurements.*</p> <p>Lecture Notes.</p>
<i>English.</i>	1	4	HISTORY: The history of the United States Navy.	MacLay's History of the Navy.
<i>Languages.</i>	1	4	FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.	Same as for the first term and French newspapers.

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship.	3	4	<p>SEAMANSHIP: Stowage and organization; boats and their management; ground tackle; handling anchors; handling sails; management under sail and under steam; turning and maneuvering; wharfing, docking, towing, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; use of sounding machine.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in iron and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats, special constructions; launching; types of ships; structural strength and strains, buoyancy and stability in the intact and the damaged conditions, theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities; steam steering gear; steam capstan; plans of ships and reproduction in model; finding the displacement of ships and center of buoyancy, etc.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship; section and squadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.</p>	<p>Luce's Seamen's Department Regulations</p> <p>Special Notes and Lectures.</p> <p>Navy Department Publications.</p> <p>White's Manual of Naval Architecture</p> <p>Welch's Text-book of Naval Architecture</p> <p>Navy and International Signal Books</p> <p>Fleet Drill Book, Navy Department.</p>
Ordinance.	3	4	<p>GUNNERY: Accuracy and rapidity of fire; the probability of hitting objects of various forms; the mean and probable errors of guns; derivation of rules for correcting certain errors that arise in practice at sea</p>	<p>Accuracy and Probability of Fire, Navy Academy publications</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Ordnance—Cont'd.</i>	3	4	<p>INSTRUCTIONS FOR INFANTRY AND ARTILLERY: Schools of the squad, company, battalion, and brigade, in close and extended orders; street riot drill; ceremonies.</p> <p>GUNNERY DRILL: Distribution of the crew to the guns and other stations; duties of officers and men; drill of guns of the main and secondary batteries.</p> <p>GUNS AND GUN MOUNTS: Metals used in their construction; description and manufacture of service guns and their mounts for main and secondary batteries; nomenclature, care, and preservation of the ordnance outfit.</p>	<p>Instructions for Infantry and Artillery, U. S. Navy.</p> <p>Gunnery Drill Book for the New Armaments.</p> <p>Text-book of Ordnance and Gunnery. Descriptions of Modern Ordnance and Modern Gun Mounts.</p>
<i>Navigation.</i>	4	4	<p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurement of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations, current observations; sailing directions, the form of the earth, with special reference to the construction of charts; projections; running surveys.</p>	<p>Chauvenet's Spherical and Practical Astronomy.*</p> <p>Walker's Navigation.</p> <p>Bowditch's Navigator.</p> <p>American Ephemeris and Nautical Almanac.</p> <p>Phelps's Practical Marine Surveying.</p> <p>Projection Tables.</p> <p>Craig's Azimuth.*</p>
<i>Mechanics.</i>	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS: Strength of materials; elasticity; stress and strain; theory of structures; strength and deflection of beams, beams of uniform resistance.	<p>Cotterill and Slade's Lesson in Applied Mechanics.</p> <p>Cotterill's Applied Mechanics.</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text books.
Physics.	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric light wires; experiments upon induction; practice in photography and micro-photography.	Same as for the class year Thompson's Physics Electric Machinery Lecture Notes

SECOND TERM.

Seamanship.	4	4	Course of the first term continued.	Same as for the first term.
Ordnance.	5	4	<p>BALLISTICS: The laws of combustion of gunpowder; velocities and pressures in guns; rifling, effect on pressure; the motion of projectiles in a nonresisting medium and in air; computation and use of ballistic and range tables; accuracy and probability of fire; derivation of rules for correcting the errors which arise in gunnery practice; the penetration and effect of projectiles.</p> <p>GUNS: Computation of their elastic strength and shrinkage.</p> <p>AMMUNITION: Its description, preparation, supply, stowage, and use.</p> <p>ARMOR: Description of; use of armor and other protection of matériel and personnel.</p> <p>TORPEDOES: Their description and use.</p> <p>GUN CARRIAGES: Their construction and the mechanism employed in controlling and adjusting recoil, and the theory of such control.</p> <p>AMMUNITION: Its preparation and use.</p>	<p>Interior and Exterior Ballistics</p> <p>Accuracy and Probability of Fire.</p> <p>Ordnance Notes</p> <p>The Elastic Strength of Guns</p> <p>Text book of Ordnance and Gunnery</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Navigation.</i>	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes that take place upon a change of geographical position, the graphic representations of the amount and direction of the forces that act on the needle, and the mechanical correction of the deviation and heeling errors.</p> <p>PRACTICAL NAVIGATION. PRACTICAL SURVEYING.</p>	<p>Admiralty Manual for the Deviations of the Compass.</p> <p>Diehl's Practical Problems and the Compensation of the Compass in the United States Navy.*</p>
<i>English.</i>	2	4	<p>INTERNATIONAL LAW: The objects, sources, and sanctions of international law; the laws of war, embargo, reprisal, and retorsion; blockade; contraband of war; right of search; ship's papers and nationality; prizes; privateering; piracy; the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters; licenses to trade; recaptures.</p>	<p>Woolsey's International Law.</p>
	1	4	<p>SPECIAL INSTRUCTIONS: General description of the human body and its functions; the arrest of hemorrhage; resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction Fridays, 7:30 to 9:30 p. m., additional.)</p>	<p>Martin's The Human Body and the Effects of Narcotics.</p>

COURSE OF INSTRUCTION.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Seamanship.</i>	2	4	NAVAL CONSTRUCTION: Definitions: history and practice of shipbuilding in iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching, principles of stowage, resistance, propulsion, and steering of ships; qualities of ships, construction and use of diagrams of qualities; the use of qualities, steam steering gear, steam capstan; plans of ships and reproduction in model; finding the displacement of ships and center of buoyancy, etc.	Special Notes and Lectures Navy Department Publications White's Manual of Naval Architecture Welch's Text-book of Naval Architecture
<i>Steam Engineering.</i>	3	4	MARINE ENGINES: General description of modern marine engines and their dependencies: expansion of steam, piston speed and size of cylinders, uses and construction of parts of a marine engine, calculations on twisting and bending moments: principles and construction of condensers and pumps, types of valves and valve gear, and valve diagrams: principles and construction of various types of propellers; the indicator and its diagrams, power of an engine and calculations relating thereto, lectures on the metallurgy of iron and steel, the production of bronzes and alloys with reference to their use in marine engineering.	Sutton's Marine Engineering.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
<i>Steam Engineering—Continued.</i>	2	4	BOILERS: Various types and efficiency of steam boilers; construction of boilers in detail, and materials used; details of fittings and attachments; causes of decay; care and preservation of boilers; fuels, solid and liquid; combustion of, with the methods of their application under natural and forced draft, their comparative qualities and properties, with instructions as to their selection for, and care of, as steam fuels; practical tests of the calorific value of fuels.	Seaton's <i>Marine Engineering.</i> Stromeyer's <i>Marine Boiler Management and Construction.</i>
	3	4	DESIGNING MACHINERY: The strains to which machinery is subjected, and the resistance offered to these strains; relative value of materials used in machinery as to cost and strength; testing materials; principles and considerations governing the design, drawing, specifications, and proportions of the various parts of engines and boilers, with practical application in the designing room.	Unwin's <i>Elements of Machine Design—Parts I and II.</i>
<i>Mechanics.</i>	3	4	Same as for the line division.	Same as for the line division.
<i>Physics.</i>	3	4	Same as for the line division.	Same as for the line division.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
Seamanship.	3	4	Course of the first term continued.	Same as for the first term.
Steam Engineering.	3	4	MARINE ENGINES: Objects of test trials, boiler trials and their results; friction of the engine, and the dynamometer, standard methods and examples of engine trials. Physical properties of steam; convertibility of heat and work; theory of the steam engine; air and heat engines, efficiency of an engine; theoretical considerations governing the expansion of steam; effects of clearance, wire drawing, jacketing, liquefaction, and reevaporation; experiments on the steam engine and the methods of determining its efficiency.	Lineham & Mather Engineering Part I Cottrell & Steam Engine Considered as a Machine
	3	4	BOILERS: Designing and drawing.	Same as for the first term with notes
	3	4	DESIGNING MACHINERY: Designing and drawing.	Same as for the first term with notes.
	3	4	EXPERIMENTAL ENGINEERING: Tests and experiments; standardizing indicators, steam and vacuum gauges, recording and measuring instruments, etc.; tests of fuels and lubricants, determination of strengths and elasticities of metals with the testing-machine, engine and boiler tests; dynamometric tests of propellers, etc.	Carpenter & Experimental Engineering
	3	4	SPECIAL INSTRUCTION: Same as for the first division.	Same as for the first division.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship					1	1	3	4	2	3
Ordnance							3	5		
Navigation						2	4	4		
Steam Engineering					3	3			8	12
Mechanics					5	4½	3		3	
Physics				4 F	4	4	3		3	
Mathematics	6	5	5	5						
English	5	5	4	2	1	1		2		
Languages	5	5½	3	2	1 F	1 F				
Drawing			4	2½	2					

SPECIAL INSTRUCTION.

The effects of alcohol, tobacco, and other narcotics		½ F		½ F
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F Friday 7:30 to 9:30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Department.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Seamanship			M. (3)	T. W. Th. (3)	T. W. (3)
Ordnance				T. Th. (3), F. (3)	
Navigation				M. (3), W. F. S. (1)	
Steam Engineering			W. Th. F. (3)		{ W. F. S. (1), T. Th. (2), M. Th. F. (3). }
Mechanics			M. T. W. F. (1), Th. (2)	M. W. F. (2)	M. W. F. (2)
Physics			M. T. W. F. (2)	M. T. Th. (1)	M. T. Th. (1)
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (2)			
English	M. T. W. Th. F. (2)	M. F. S. (1), T. (3)	Th. (1)		
Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	F. (7.30 to 9.30 p.m.)*		
Drawing		M. W. Th. F. (3)	T. (3), S. (1)		

SECOND TERM.

Seamanship			W. (2)	M. T. W. Th. (3)	M. W. Th. (3)
Ordnance				M. T. W. Th. (3), F. (3)	
Navigation			M. T. (3)	M. T. Th. F. (1)	
Steam Engineering			W. Th. F. (3)		{ M. T. W. Th. F. (1), M. W. (3), T. F. (3), T. Th. F. (2). }
Mechanics			M. W. Th. F. S. (1)		
Physics		{ M. (3), T. W. F. (1), F. (7.30 to 9.30 p.m.) }	M. T. Th. F. (3)		
Mathematics	M. T. W. Th. F. (1)	M. T. W. Th. F. (2)			
English	M. T. W. Th. F. (3)	M. Th. (1)	T. (1)	W. (1), F. (2)	
Languages	M. T. W. Th. F. (3), S. (1)	W. Th. (3)	F. (7.30 to 9.30 p.m.)		
Drawing		T. F. (3), S. (1)			

Special instruction (Psychology and Hygiene)

S. (1), F. (1) 20 to 9.30 S. (1), F. (1) 20 to 9.30 p.m.

* Lectures and practical drill sessions

Recitation period as stated term from January 1 to March 10

TABLE OF COEFFICIENTS.

DEPARTMENT AND SUBJECTS.		Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
Discipline	{ Conduct... Efficiency	3 1	5 3	7 5	8 8	8 8	160 160	160		
<i>Seamanship.</i>										
Seamanship, Naval Construction, and Naval Tactics *				3	13	8		44	56	32
Practice Cruise					2		72			
<i>Ordnance.</i>										
Ordnance Instructions, Infantry Tactics, and Gunnery					15		60		44	
Ordnance and Gunnery										
<i>Navigation.</i>										
Astronomy, Navigation, and Surveying				3	12			12	44	
Practice Cruise					2		68			
<i>Steam Engineering.</i>										
Steam Machinery, Marine Engines, and Boilers				8					20	
Summer Practical Work				2		5	44			
Marine Engines						10				72
Designing Machinery						12				36
Boilers						8		184		40
<i>Mechanics.</i>										
Differential and Integral Calculus, and Mechanics				12						
Least Squares and Strength of Materials					5	5	68			
Mechanics						5		88		
<i>Physics.</i>										
Chemistry and Physics			4							
Physics				10	5	5	80	80		
<i>Mathematics.</i>										
Algebra and Geometry		5								
Trigonometry, Analytical Geometry, and Descriptive Geometry			10				60	60		
<i>English.</i>										
English and History		5		2						
English and Law			5					36		
International Law					4		52		24	
<i>Languages.</i>										
French, and Spanish		5	5	2			52	52	28	28
<i>Drawing.</i>										
Mechanical Drawing			6	3			36	36		
<i>Miscellaneous.</i>										
Special Instructions (Physiology and Hygiene)					2	2	8	8		
Cruise Report									16	16
Navigation Note Book, Journals, and Station Bills									8	16
Maxima for each class		76	152	228	304	304	760	760	240	2

* Seamanship and Naval Tactics for line division alone.

† In making up the standing for a year the second term is given double the weight of the first †

; Navigation note-books for line division alone.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sailmaking; making up, bending, unben- ing, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signals; Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE.

Infantry, schools of the squad, company, and battalion, in close and extended orders; artillery, schools of the battery and battalion; exercise and target practice with small arms and guns of main and secondary batteries; exercise with the smallsword, and broadsword; handling and firing torpedoes; use of Riehl and Rodman testing machines; determinations of velocities with the Le Boulenger and Schultz chronoscopes; experimental determination of range tables, also of the drift; the preparation, inspection, care, and preservation of ordnance material.

Six medals are awarded annually for marksmanship: Gold, silver, and bronze medals to the cadets of the first class, as first, second, and third prizes, respectively for excellence in rapid-fire gun practice; and gold, silver, and bronze medals to the cadets of the second class, as first, second, and third prizes, for excellence in practice with the service rifle and revolver.

In June, 1895, the medals for rapid-fire gun practice were awarded as follows:

Gold medal to Cadet E. Z. Johnston.

Silver medal to Cadet A. T. Chester.

Bronze medal to Cadet J. D. Sayers.

The medals for small-arm marksmanship for 1895 were awarded as follows:

Gold medal to Cadet T. C. Hart.

Silver medal to Cadet P. L. Pratt.

Bronze medal to Cadet S. G. Magill, jr.

At the competitive company drill on June 5, 1895, the battalion colors were awarded to the Second Company—Cadet-Lieutenant P. M. Rannon, commanding—being the best-drilled company.

NAVIGATION.

Navigation: Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth.

Surveying: Surveying, and constructing a chart of, a portion of the Severn River.

Compass Deviations: Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact coefficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a Navy compensating binnacle.

STEAM ENGINEERING.

Shopwork:

The Pattern Shop: Selection and treatment of different woods for different purposes. Elementary work of the carpenter shop, through mortising, joining, etc., to finished pattern work.

The Foundry: Iron and brass casting; the making of bronzes, alloys, etc.

The Blacksmith Shop: Forging, welding, etc.; tempering, case hardening, etc.; bending and quenching tests of metals.

The Boiler Shop: Riveting, soft and hard patching, calking, annealing, tube expanding, etc.; testing.

The Machine Shop: Vise bench work, machine tool work including the setting of work, turning, planing, boring, slotting, etc.; pipe fitting; building, erection, and aligning of engines and engine fitting; preparation of working drawings and working from the same.

Shipwork:

Management of main and auxiliary engines: Getting up steam at leisure and in emergencies; fire-room and engine-room routine, firing, water-tending, and oiling; routine under way when desirable to obtain maximum speed; same for maximum steaming radius; management of engines while manœvering at sea; determining the condition and locating defects in machinery while in motion; causes and prevention of explosion of boilers, steam pipes, gases in uptakes and in coal bunkers; lying under banked fires; coming to anchor; overhauling machinery; cleaning boilers and condensers; preservation of machinery of a vessel when out of commission; conducting progressive and full-power trials and the collecting of data.

Ordinary Casualties: Hot crown sheets, burst feed pipes, leaky boiler tubes and seams, burnt grate bars, hot pins and journals, fire in bunkers, flooded compartments.

Damages received in battle: Preparations for action; temporary repairs and alternative devices and expedients to be adopted in event of receiving injury from shot or torpedoes; quick methods of disabling machinery about to fall into the hands of the enemy.

Instruments: Use of slide rule, averaging machine, apparatus for testing oils and smoke gases; standardizing steam gauges and indicators.

Miscellaneous: Preparing specifications for purchase of machinery and stores; testing, inspection, and preservation of stores; preparation of various cements, paints, and varnishes in ordinary use; selection of coals; making estimates of the amount of coal on hand, prevention of deterioration, etc.; making of watch, quarter, and station bills.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

PROGRAMME OF PRACTICAL INSTRUCTION.

When more than one kind of exercise is prescribed during a week, the number of each exercise is indicated by a figure in parentheses.

FIRST CLASS.

Academic months.	Week ending.	First division.	Second division.	Third division.	Fourth division.
1895.					
Oct.....	5	Company.	Target, great guns(4) Seamanship (1).	Artillery.	Steam tactics (4) Seamanship
	12	Artillery.	Steam tactics (4). Battery drill (1).	Company.	Target, great guns (4) Battery drill (1) Artillery
	19	Target, great guns(4) Seamanship (1).	Company.	Steam tactics (4). Seamanship (1).	Company.
	26	Steam tactics (4). Battery drill (1).	Artillery.	Target, great guns(4) Battery drill (1).	Company.
Nov	2	Battalion Infantry.	Battalion Infantry.	Battalion Infantry	Battalion Infantry
	9	Seamanship.	Seamanship.	Seamanship.	Seamanship
	16	Seamanship.	Seamanship.	Seamanship.	Seamanship
	23	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery
	30	Steam.	Practical ordnance.	Practical electricity.	Sword exercise
Dec	7	Practical electricity.	Sword exercise.	Steam.	Practical ordnance
	14	Practical ordnance.	Steam.	Sword exercise.	Practical ordnance
	21	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.
	28	NO DRILLS. See note.			
1896.					
Jan	4	Steam.	Practical ordnance.	Practical electricity	Sword exercise
	11	Practical electricity.	Sword exercise.	Steam.	Practical ordnance
	18	Practical ordnance.	Steam.	Sword exercise.	Practical electricity
	25	Sword exercise.	Practical electricity.	Practical ordnance	Steam
Feb	1	SEMI-ANNUAL EXAMINATION. No drills.			
	8	Steam.	Seamanship.	Practical electricity	Sword exercise
	15	Practical electricity.	Sword exercise.	Steam.	Seamanship
	22	Seamanship.	Steam.	Sword exercise.	Practical electricity
	29	Sword exercise	Practical electricity	Seamanship.	Steam.
Mar	7	Battalion Artillery (4)	Battalion Artillery (4)	Battalion Artillery (4)	Battalion Artillery (4)
	14	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1)
	21	Target, great guns (4)	Steam tactics (4).	Skirmish (4).	Torpedoes (4)
	28	Battery drill (1).	Seamanship (1).	Battery drill (1)	Seamanship (1)
	5	Boats (1).	Boats (1).	Boats (1).	Boats (1)
	12	Skirmish (4).	Torpedoes (4).	Target, great guns(4)	Steam tactics (4)
	19	Seamanship (1).	Landing party (1)	Seamanship (1)	Landing party (1)
	26	Boats (1).	Boats (1).	Boats (1).	Boats (1)
	3	Steam tactics (4).	Target, great guns (4)	Torpedoes (4)	Skirmish (4)
	10	Seamanship (1)	Battery drill (1)	Seamanship (1)	Battery drill (1)
	17	Boats (1)	Boats (1)	Boats (1)	Boats (1)
Apr	4	Torpedoes (4).	Skirmish (4)	Steam tactics (4).	Target, great guns (4)
	11	Landing party (1).	Seamanship (1).	Landing party (1)	Seamanship (1)
	18	Boats (1).	Boats (1).	Boats (1)	Boats (1)
	25	Steam tactics (4).	Steam tactics (4).	Steam tactics (4)	Steam tactics (4)
	3	Landing party (1).	Seamanship (2)	Landing party (1).	Seamanship (2)
	10	Seamanship (1).	Battery drill (5).	Seamanship (1)	Battery drill (5)
	17	Seamanship.	Seamanship (1).	Seamanship.	Seamanship (1)
	24	Battery drill (5).	Seamanship (1).	Battery drill (5).	Seamanship (1)
	31	Seamanship (1).	Seamanship.	Seamanship (1).	Seamanship.

FIRST CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896.					
May.....	2	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	9	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).
	16	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (2).
M.		Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
T.		Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
W.		Seamanship.	Seamanship.	Seamanship.	Seamanship.
Th.		Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
F.		Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
S. 23		Battle drill.	Battle drill.	Battle drill.	Battle drill.
ANNUAL EXAMINATION.					
June 1 to 10.					
June 10 to Aug. 28	Practice cruise.				

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month. Cadets of the Engineer Division will take part in drills on board the *Benarof* when underway in "Practical electricity," in "General steam tactics," and at "Fire quarters." At other times they will have "Steam drill."

SECOND CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1895.					
Oct.....	5	Company.	Target, machine guns (4).	Artillery.	Steam tactics (4).
	12	Artillery.	Seamanship (1). Steam tactics (4). Battery drill (1).	Company.	Seamanship (1). Target, machine guns (4). Battery drill (1). Artillery.
	19	Target, machine guns (4). Seamanship (1).	Company.	Steam tactics (4).	
	26	Steam tactics (4).	Artillery.	Seamanship (1). Target, machine guns (4).	Company.
Nov.....	2	Battery drill (1). Battalion Infantry.	Battalion Infantry.	Battery drill (1). Battalion Infantry.	Battalion Infantry.
	9	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	16	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	23	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	30	Steam.	Signals (3). Seamanship (2). Sword exercise.	Steam.	Sword exercise.
Dec.....	7	Steam.		Steam.	Signals (3). Seamanship (2). Steam.
	14	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam.
	21	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.
	28	NO DRILLS. See note.			
1896.					
Jan.....	4	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
	11	Steam.	Sword exercise.	Steam.	Signals (3). Seamanship (2). Steam.
	18	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam.
	25	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam.
Feb.....	1	SEMI-ANNUAL EXAMINATION. No drills.			

SECOND CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896.					
Feb.....	8	Steam.	Practical ordnance.	Steam.	Sword exercise.
	15	Steam.	Sword exercise.	Steam.	Practical ordnance.
	22	Practical ordnance.	Steam.	Sword exercise.	Steam.
	29	Sword exercise.	Steam.	Practical ordnance.	Steam.
Mar.....	7	Battalion Artillery (4)	Battalion Artillery (4)	Battalion Artillery (4)	Battalion Artillery (4)
	14	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	21	Target, great guns (4)	Steam tactics (4).	Skirmish (4).	Target, small arms (4)
		Battery drill (1).	Seamanship (1).	Battery drill (1).	Seamanship (1).
		Boats (1).	Boats (1).	Boats (1).	Boats (1).
	21	Skirmish (4).	Target, small arms (4)	Target, great guns (4)	Steam tactics (4)
		Seamanship (1).	Landing party (1).	Seamanship (1)	Landing party (1)
		Boats (1).	Boats (1).	Boats (1).	Boats (1)
	28	Steam tactics (4).	Target, great guns (4)	Target, small arms (4)	Skirmish (4)
		Seamanship (1).	Battery drill (1).	Seamanship (1).	Battery drill (1)
		Boats (1).	Boats (1).	Boats (1).	Boats (1)
Apr.....	4	Target, small arms (4)	Skirmish (4).	Steam tactics (4).	Target, great guns (4)
		Landing party (1).	Seamanship (1).	Landing party (1).	Seamanship (1)
		Boats (1).	Boats (1).	Boats (1).	Boats (1)
	11	Seamanship (5).	Seamanship.	Seamanship (5).	Seamanship
		Landing party (1).		Landing party (1).	
	18	Seamanship.	Battery drill (5).	Seamanship.	Battery drill (5)
			Seamanship (1).		Seamanship
	25	Battery drill (5).	Seamanship.	Battery drill (5).	Seamanship
		Seamanship (1).		Seamanship (1).	
May.....	2	Seamanship.	Seamanship (5).	Seamanship.	Seamanship
			Landing party (1)		Landing party (1)
	9	Company (4).	Company (4).	Company (4).	Company (4)
		Seamanship (2).	Seamanship (2).	Seamanship (2).	Seamanship (2)
	16	Battalion Infantry (5).	Battalion Infantry (5)	Battalion Infantry (5)	Battalion Infantry (5)
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1)
	M.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	T.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics
	F.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	S.	Battle drill.	Battle drill.	Battle drill.	Battle drill.

June 1 }
to 10. }

ANNUAL EXAMINATION.

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on Wednesday afternoon in each month.

SECOND CLASS—Continued.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	1	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Gun house, p. m.	Machine shop, a. m. Signals, p. m.	Machine shop, a. m. Gun house, p. m.
	2	Machine shop, a. m. Gun house, p. m.	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Gun house, p. m.	Machine shop, a. m. Signals, p. m.
	3	Machine shop, a. m. Signals, p. m.	Machine shop, a. m. Gun house, p. m.	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Gun house, p. m.
	4	Running steam cutters, a. m. Gun house, p. m.	Running steam cutters, a. m. Signals, p. m.	Running steam cutters, a. m. Gun house, p. m.	Running steam cutters, a. m. Target, small arms, p. m.
	5	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.
	6	Machine shop, a. m. Target, machine guns, p. m.	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Steam tactics, p. m.
	7	Machine shop, a. m. Steam tactics, p. m.	Machine shop, a. m. Target, machine guns, p. m.	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Boats, p. m.

SECOND CLASS—Continued.

Summer months.	Weeks.	First division.	Second division.	Third division.	Fourth division.
	5	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Steam tactics, p. m.	Machine shop, a. m. Target, machine guns, p. m.	Machine shop, a. m. Target, small arms p. m.
	9	Machine shop, a. m. Target, small arms, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Steam tactics, p. m.	Machine shop, a. m. Target, machine guns, p. m.
	10	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.	Machine shop, a. m. Boats, p. m.

THIRD CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1895.					
Oct.	5	Company.	Boats (4). Seamanship (1).	Artillery.	Boats (4). Seamanship (1).
	12	Artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill (1).
	19	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Artillery.
	26	Boats (4). Battery drill (1).	Artillery.	Boats (4). Battery drill (1).	Company.
Nov.	2	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	9	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	16	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	23	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	30	Steam.	Seamanship.	Target, small arms (3) Great guns (2). Steam.	Sword exercise.
Dec.	7	Target, small arms (3) Great guns (2).	Sword exercise.	Steam.	Seamanship.
	14	Seamanship.	Steam.	Sword exercise.	Target, small arms (3) Great guns (2).
	21	Sword exercise.	Target, small arms (3) Great guns (2).	Seamanship.	Steam.

28 NO DRILLS. See note.

1896.					
Jan.	4	Steam.	Seamanship.	Target, small arms (3) Great guns (2). Steam.	Sword exercise.
	11	Target, small arms (3) Great guns (2).	Sword exercise.	Steam.	Seamanship.
	18	Seamanship.	Steam.	Sword exercise.	Target, small arms (3) Great guns (2).
	25	Sword exercise.	Target, small arms (3) Great guns (2).	Seamanship.	Steam.

Feb. 1 SEMI ANNUAL EXAMINATION. No drills.

	8	Steam.	Signals (3). Seamanship (2).	Target, small arms (3) Great guns (2). Steam.	Sword exercise.
	15	Target, small arms (3) Great guns (2).	Sword exercise.	Steam.	Signals (3). Seamanship (2).
	22	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Target, small arms (3) Great guns (2).
	29	Sword exercise.	Target, small arms (3) Great guns (2).	Signals (3). Seamanship (2).	Steam.
Mar.	7	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).	Battalion Artillery (4). Seamanship (1).
	14	Target, small arms (4). Battery drill (1). Boats (1).	Seamanship (5). Boats (1). Boats (5).	Skirmish (4). Battery drill (1). Boats (1).	Boats (4). Seamanship (1). Boats (1).
	21	Skirmish (4). Seamanship (1). Boats (1).	Landing party (1)	Target, small arms (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).

THIRD CLASS—Continued.

Academic months.	Week ending	First division.	Second division.	Third division.	Fourth division.
1896.					
Mar....	28	Seamanship (5). Boats (1).	Target, small arms (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr	4	Boats (5). Landing party (1).	Skirmish (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).	Target, small arms (4). Seamanship (1). Boats (1).
	11	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.
	18	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	25	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May.....	2	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	9	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	16	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).	Battalion Infantry (5). Seamanship (1).
	M.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	T.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Boats.	Boats.	Boats.	Boats.
	F.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	S.	21 Battle drill.	21 Battle drill.	21 Battle drill.	21 Battle drill.

June 1
to 10.

ANNUAL EXAMINATION.

June 10
to Aug
28

Practice cruise.

Drills will be suspended from December 24 to January 2. There will be Fire quarters on Wednesday afternoon in each month.

FOURTH CLASS.

Academic months.	Week ending	First division.	Second division.	Third division.	Fourth division.
1896.					
Oct.	5	Company.	Boats (4). Seamanship (1).	Artillery.	Boats (4). Seamanship (1).
	12	Artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill (1).
	19	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Artillery.
	26	Boats (4). Battery drill (1).	Artillery.	Boats (4). Battery drill (1).	Company.
Nov	3	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	10	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	17	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	24	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	31	Gymnastics.	Dancing (1). Seamanship (2).	Gymnastics.	Dancing (1). Seamanship (2).
Dec	7	Gymnastics.	Dancing (1). Gymnastics (2).	Gymnastics.	Dancing (1). Gymnastics (2).
	14	Dancing (1). Seamanship (2).	Gymnastics.	Dancing (1). Seamanship (2).	Gymnastics.
	21	Dancing (1). Seamanship (2).	Gymnastics.	Dancing (1). Seamanship (2).	Gymnastics.

NO DRILLS. See note.

FOURTH CLASS—Continued.

Academic months	Week ending	First division.	Second division.	Third division.	Fourth division.
1895.					
Jan	4	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	11	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	18	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	25	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Feb	1	SEMI ANNUAL EXAMINATION. No drills.			
	8	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).
	15	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (2).
	22	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.
	29	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
Mar	7	Battalion Artillery (4)	Battalion Artillery (4)	Battalion Artillery (4)	Battalion Artillery (4)
	14	Seamanship (1). Gymnastics (4). Battery drill (1). Boats (1).	Seamanship (1). Seamanship (5). Boats (1).	Seamanship (1). Skirmish (4). Battery drill (1). Boats (1).	Seamanship (1). Boats (5). Seamanship (1).
	21	Skirmish (4). Seamanship (1). Boats (1).	Boats (5). Landing party (1).	Gymnastics (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).
	28	Seamanship (5). Boats (1).	Gymnastics (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr	4	Boats (5). Landing party (1).	Skirmish (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).	Gymnastics (4). Seamanship (1). Boats (1).
	11	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.
	18	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	25	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May	2	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	9	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	16	Battalion Infantry (5)	Battalion Infantry (5)	Battalion Infantry (5)	Battalion Infantry (5)
	M.	Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	T.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	W.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.	Battalion Artillery.
	Th.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	F.	Boats.	Boats.	Boats.	Boats.
	S.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.	Battalion Infantry.
	23	Battle drill.	Battle drill.	Battle drill.	Battle drill.
Sept	7	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	14	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	21	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
	28	Artillery.	Artillery.	Artillery.	Artillery.
	28	School of soldier.*	School of soldier.*	School of soldier.*	School of soldier.*
		Artillery.	Artillery.	Artillery.	Artillery.

* Swimming daily.

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month.

Practical instruction in chemistry.....	13					13
Gymnastics and boxing.....				17	17	17
Swimming.....						24
Dancing.....				18	18	18
* Practice cruise. † Study periods. ; Engineer Division.						

The instructions in seamanship and gunnery on board of the Practice Steamers are also made instructions in running and managing the engines and boilers of those vessels. The instructions in naval tactics are also made instructions in running and managing the engines and boilers of the steam launches when practicable.

ANNUAL REGISTER

OF THE

UNITED STATES NAVAL ACADEMY,

ANNAPOLIS, MD.

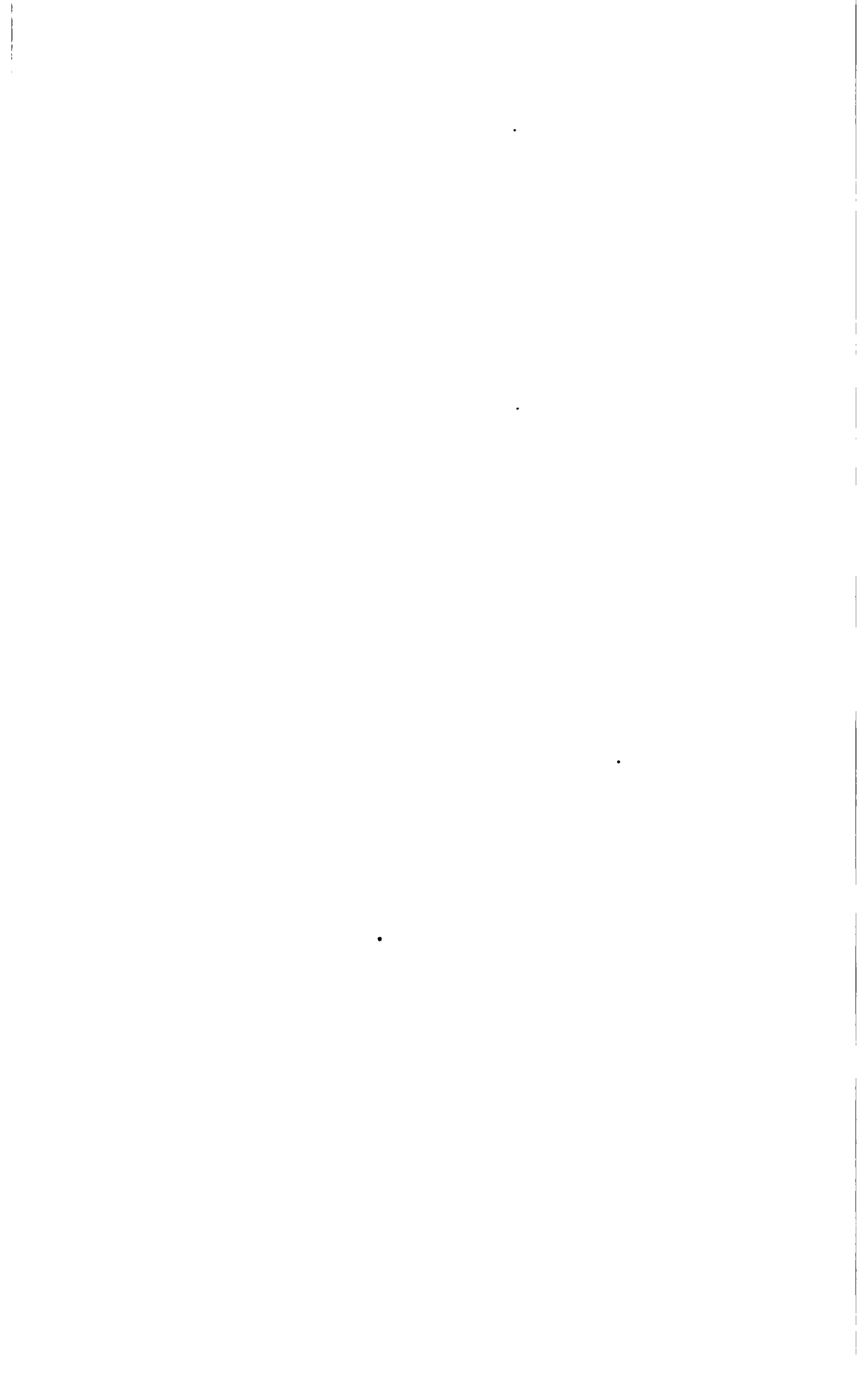
FIFTY-SECOND ACADEMIC YEAR.

1896-'97.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1896.



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THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy was founded in 1845 by the Hon. George Bancroft, Secretary of the Navy, in the Administration of President James K. Polk. It was formally opened October 10 of that year under the name of the Naval School, with Commander Franklin Buchanan as superintendent. It was placed at Annapolis, Md., on the land occupied by Fort Severn, which was given up by the War Department for the purpose. The course was fixed at five years, of which only the first year and the last were spent at the school, the intervening three years being passed at sea. This arrangement was not strictly adhered to, the exigencies of the service making it necessary, in many cases, to shorten the period of study. In January, 1846, four months after the opening of the school, the students consisted of 36 midshipmen of the date of 1840, who were preparing for the examination for promotion; 13 of the date of 1841, who were to remain until drafted for service at sea; and 7 acting midshipmen, appointed after September of the previous year. The midshipmen of the date of 1840 were the first to be graduated, finishing their limited course in July, 1846, and they were followed in order by the subsequent dates until the reorganization of the school in 1850.

In September, 1849, the following board was appointed to revise the plan and the regulations of the Naval School:

Commander William B. Shubrick,
Commander Franklin Buchanan,
Commander Samuel F. Du Pont,
Commander George P. Upshur,
Surgeon W. S. W. Ruschenberger,
Professor William Chauvenet,
Captain Henry Brewerton, United States Army.

The plan reported by the board was approved, and went into operation July 1, 1850. The new organization provided for a course of seven years, the first two and the last two at the school, and the three intermediate years at sea. The school was placed under the supervision of the Bureau of Ordnance and Hydrography, and its name was changed to the United States Naval Academy. The corps of professors was enlarged, the course was extended, and the system of separate departments with executive heads was fully adopted. It was provided that a Board of Visitors should make an annual inspection of the Academy and report upon its condition to the Secretary of the Navy. A suitable vessel was attached to the Academy as a practice ship, and the annual practice cruises were begun.

After the system had been in operation a year new changes were proposed, and the recommendations of the academic board on the subject were referred to the board of examiners for the year 1851, composed of the following-named officers:

Commodore David Conner,
Captain Samuel L. Breese,
Commander C. K. Stribling,
Commander A. Bigelow,
Commander Franklin Buchanan,
Lieutenant Thomas T. Craven.

The change recommended by the board of examiners, and adopted by the Department, consisted mainly in leaving out the requirement of three years of sea service in the middle of the course, thus making the four years of study consecutive. The practice cruise supplied the place of the omitted sea service, and gave better opportunities for training. The change went into operation in November, 1851, together with other improvements recommended by the board. This system has been continued, with some slight modifications, to the present time. The first class to receive the benefit of it was that which entered in 1851. Six members of this class completed the course in three years, and were graduated in June, 1854; the rest of the class followed in 1855.

In May, 1861, on the outbreak of the war, the Academy was removed to Newport, R. I. The three upper classes were detached and ordered to sea, and the remaining acting midshipmen were quartered in the Atlantic House and on board the frigates *Constitution* and *Santee*. In the summer of 1863 the Academy was removed back to Annapolis, where it has since remained.

When the Bureau of Navigation was established, July 5, 1862, the Academy was placed under its supervision; March 1, 1867, it was placed under the direct care and supervision of the Navy Department, the administrative routine and financial management being still conducted through the Bureau. On the 1st of March, 1869, this official connection with the Bureau ceased, but was renewed by the general order of the Navy Department issued June 25, 1869.

The term of the academic course was changed by law, March 3, 1873, from four to six years. The change took effect with the class that entered in the following summer.

In 1866 a class of acting third assistant engineers was ordered to the Academy for instruction. The course embraced the subjects of steam engineering, mechanical chemistry, mechanics, and practical exercises with the steam engine and in the machine shop. This class was graduated in June, 1868, together with two cadet engineers who had entered the academy in 1867. After an interval of four years, in October, 1871, a new class of cadet engineers was admitted. This class finished a two years' course, somewhat more extended than that of the class of 1868, and was graduated in 1873. In 1872 and 1873 new classes were admitted, the first of which left the Academy in 1874 and the second in 1875. By an act of Congress approved February 24, 1874, the course of instruction for cadet engineers was made four years instead of two; the new provision was first applied to the class entering the Academy in the year 1874. This class was graduated in June, 1878.

By an act of Congress approved August 5, 1882, it was provided that from that date "there shall be no appointments of cadet-midshipmen or cadet-engineers at the Naval Academy, but in lieu thereof naval cadets shall be appointed from each Congressional district and at large, as now provided by law for cadet-midshipmen, and all the undergraduates at the Naval Academy shall hereafter be designated and called 'naval cadets;' and from those who successfully complete the six years' course, appointments shall hereafter be made as it is necessary to fill vacancies in the lower grades of the line and Engineer Corps of the Navy and of the Marine Corps." And provided further, That no greater number of appointments into these grades shall be made each year than shall equal the number of vacancies which has occurred in the same grades during the preceding year; such appointments to be made from the graduates of the year, at the conclusion of their six years' course in the order of merit, as determined by the academic board of the Naval Academy; the assignment to the various corps to be made by the Secretary of the Navy upon the recommendation of the academic board. But nothing herein contained shall reduce the number of appointments from such graduates below ten in each year nor deprive of such appointment any graduate who may complete the six years' course during the year eighteen hundred and eighty-two. And if there be a

surplus of graduates, those who do not receive such appointment shall be given a certificate of graduation, an honorable discharge, and one year's sea pay, as now provided by law for cadet-midshipmen; and so much of section fifteen hundred and twenty-one of the Revised Statutes as is inconsistent herewith is hereby repealed.

"That any cadet whose position in his class entitles him to be retained in the service may, upon his own application, be honorably discharged at the end of the four years' course at the Naval Academy, with a proper certificate of graduation."

The act of Congress approved March 2, 1889, provides that "the Academic Board of the Naval Academy shall on or before the thirtieth day of September in each year separate the first class of naval cadets then commencing their fourth year into two divisions, as they may have shown special aptitude for the duties of the respective corps, in the proportion which the aggregate number of vacancies occurring in the preceding fiscal year ending on the thirtieth day of June in the lowest grades of commissioned officers of the line of the Navy and Marine Corps of the Navy shall bear to the number of vacancies to be supplied from the Academy occurring during the same period in the lowest grade of commissioned officers of the engineer corps of the Navy; and the cadets so assigned to the line and Marine Corps division of the first class shall thereafter pursue a course of study arranged to fit them for service in the line of the Navy, and the cadets so assigned to the Engineer Corps division of the first class shall thereafter pursue a separate course of study arranged to fit them for service in the Engineer Corps of the Navy, and the cadets shall thereafter, and until final graduation, at the end of their six years' course, take rank by merit with those in the same division, according to the merit marks; and from the final graduates of the line and Marine Corps division, at the end of their six years' course, appointments shall be made hereafter as it shall be necessary to fill vacancies in the lowest grades of commissioned officers of the line of the Navy and Marine Corps; and the vacancies in the lowest grades of the commissioned officers of the Engineer Corps of the Navy shall be filled in like manner by appointments from the final graduates of the Engineer division at the end of their six years' course: *Provided*, That no greater number of appointments into the said lowest grades of commissioned officers shall be made each year than shall equal the number of vacancies which shall have occurred in the same grades during the fiscal year then current; such appointments to be made from the final graduates of the year, in the order of merit as determined by the Academic Board of the Naval Academy, the assignment to be made by the Secretary of the Navy upon the recommendation of the Academic Board at the conclusion of the fiscal year then current; but nothing contained herein or in the naval appropriation act of August fifth, eighteen hundred and eighty-two, shall reduce the number of appointments of final graduates at the end of their six years course below twelve in each year to the line of the Navy, and not less than two shall be appointed annually to the Engineer Corps of the Navy, nor less than one annually to the Marine Corps; and if the number of vacancies in the lowest grades aforesaid, occurring in any year shall be greater than the number of final graduates of that year, the surplus vacancies shall be filled from the final graduates of following years, as they shall become available;"

"That after the fourth day of March, eighteen hundred and eighty-nine, the minimum age of admission of cadets to the Academy shall be fifteen years and the maximum age twenty years."

SUPERINTENDENTS

OF THE

UNITED STATES NAVAL ACADEMY.

	Assumed command.
Commander Franklin Buchanan	Sept. 3, 1845
Commander George P. Upshur	Mar. 15, 1847
Commander Cornelius K. Stribling	July 1, 1850
Commander Louis M. Goldsborough	Nov. 1, 1853
Captain George S. Blake	Sept. 15, 1857
Rear-Admiral David D. Porter	Sept. 9, 1865
Commodore John L. Worden	Dec. 1, 1869
Rear-Admiral C. R. P. Rodgers	Sept. 22, 1874
Commodore Foxhall A. Parker	July 1, 1878
Rear-Admiral George B. Balch	Aug. 2, 1879
Rear-Admiral C. R. P. Rodgers	June 13, 1881
Captain F. M. Ramsay	Nov. 14, 1881
Commander W. T. Sampson	Sept. 9, 1886
Captain R. L. Phythian	June 30, 1890
Captain P. H. Cooper	Nov. 15, 1894

BOARD OF VISITORS, JUNE, 1896.

Honorable J. B. ROBINSON, House of Representatives, Pennsylvania,
President.

J. C. RICHBERG, Esq., Illinois, *Vice-President.*

Honorable C. H. GIBSON, United States Senate, Maryland.

Honorable J. C. BURROWS, United States Senate, Michigan.

Honorable P. B. LOW, House of Representatives, New York.

Honorable ADOLPH MEYER, House of Representatives, Louisiana.

General J. C. TAPPAN, Arkansas.

ROBERT B. HOWELL, Esq., Nebraska.

Captain J. W. WEEKS, Massachusetts.

Professor E. S. HOLDEN, California.

CHARLES SCOTT, Esq., Mississippi.

F. WOLCOTT JACKSON, Esq., New Jersey.

ACADEMIC CALENDAR.

1896-'97.

1896.

October 1.—Beginning of first term..... Thursday.

1897.

January 25-30.—Semi-annual examination..... Monday-Saturday.

January 30.—End of first term..... Saturday.

May 15.—Examination of candidates for admission as naval cadets..... Saturday.

May 31.—End of academic year, 1896-'97..... Monday.

May 31-June 5.—Annual examination..... Monday-Saturday.

September 1.—Examination of candidates for admission as naval cadets..... Wednesday.

October 1.—Beginning of first term, 1897-'98..... Friday.

The academic months end on the following days:

1896-'97.

October.....	October 31	February.....	February 27
November.....	November 28	March.....	March 27
December.....	December 26	April.....	April 24
January.....	January 23	May.....	May 22

1897-'98.

October.....	October 30	December.....	December 30
November.....	November 27	January.....	January 27

CALENDAR FOR 1896-'97.

SEPTEMBER.							APRIL.						
Sun.	M.	T.	W.	T.	F.	Sat.	Sun.	M.	T.	W.	T.	F.	Sat.
6	7	8	9	10	11	12	4	5	6	7	8	9	10
13	14	15	16	17	18	19	11	12	13	14	15	16	17
20	21	22	23	24	25	26	18	19	20	21	22	23	24
27	28	29	30	---	---	---	25	26	27	28	29	30	---
OCTOBER.							MAY.						
4	5	6	7	8	9	10	2	3	4	5	6	7	8
11	12	13	14	15	16	17	9	10	11	12	13	14	15
18	19	20	21	22	23	24	16	17	18	19	20	21	22
25	26	27	28	29	30	31	23	24	25	26	27	28	29
---	---	---	---	---	---	---	30	31	---	---	---	---	---
NOVEMBER.							JUNE.						
1	2	3	4	5	6	7	---	---	1	2	3	4	5
8	9	10	11	12	13	14	6	7	8	9	10	11	12
15	16	17	18	19	20	21	13	14	15	16	17	18	19
22	23	24	25	26	27	28	20	21	22	23	24	25	26
29	30	---	---	---	---	---	27	28	29	30	---	---	---
DECEMBER.							JULY.						
6	7	8	9	10	11	12	---	---	---	---	1	2	3
13	14	15	16	17	18	19	4	5	6	7	8	9	10
20	21	22	23	24	25	26	11	12	13	14	15	16	17
27	28	29	30	31	---	---	18	19	20	21	22	23	24
---	---	---	---	---	---	---	25	26	27	28	29	30	31
JANUARY.							AUGUST.						
3	4	5	6	7	8	9	1	2	3	4	5	6	7
10	11	12	13	14	15	16	8	9	10	11	12	13	14
17	18	19	20	21	22	23	15	16	17	18	19	20	21
24	25	26	27	28	29	30	22	23	24	25	26	27	28
31	---	---	---	---	---	---	29	30	31	---	---	---	---
FEBRUARY.							SEPTEMBER.						
7	8	9	10	11	12	13	---	---	---	---	1	2	3
14	15	16	17	18	19	20	5	6	7	8	9	10	11
21	22	23	24	25	26	27	12	13	14	15	16	17	18
28	---	---	---	---	---	---	19	20	21	22	23	24	25
---	---	---	---	---	---	---	26	27	28	29	30	---	---
MARCH.							OCTOBER.						
7	8	9	10	11	12	13	---	---	---	---	---	1	2
14	15	16	17	18	19	20	3	4	5	6	7	8	9
21	22	23	24	25	26	27	10	11	12	13	14	15	16
28	29	30	31	---	---	---	17	18	19	20	21	22	23
---	---	---	---	---	---	---	24	25	26	27	28	29	30

OFFICERS
ATTACHED TO THE
UNITED STATES NAVAL ACADEMY.

Superintendent,

CAPTAIN P. H. COOPER.

Assistant to the Superintendent in charge of Buildings and Grounds,

LIEUTENANT-COMMANDER A. ROSS.

Assistant to the Superintendent and Secretary of the Academic Board,

LIEUTENANT G. A. MERRIAM.

Commandant of Cadets and Head of Department of Discipline,

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LIEUTENANT W. A. MARSHALL,

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A. J. CORBESIER.

Assistant Sword Masters,

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PASSED ASSISTANT ENGINEER F. H. CONANT,

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PROFESSOR C. F. BLAUVELT.

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PASSED ASSISTANT SURGEON A. M. D. McCORMICK.

Instructor,

MATTHEW STROHM.

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MEDICAL DIRECTOR T. C. WALTON.
SURGEON G. E. H. HARMON.
PASSED ASSISTANT SURGEON G. H. BARBER.
PASSED ASSISTANT SURGEON L. L. VON WEDDEKIND.
PAY DIRECTOR T. T. CASWELL, *Pay Officer and General Storekeeper*.
PAYMASTER J. P. LOOMIS, *Commissary and Cadets' Storekeeper*.
PASSED ASSISTANT ENGINEER H. O. STICKNEY.
CHAPLAIN H. H. CLARK.
PROFESSOR M. OLIVER, *Librarian*.
J. M. SPENCER, *Assistant Librarian*.
B. M. CHASE, *Secretary*.

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BOATSWAIN C. F. PIERCE.
GUNNER A. A. PHELPS.
CARPENTER J. B. FLETCHER.

Mates,

C. J. MURPHY.
W. G. SMITH.

Marine Officers.

LIEUTENANT-COLONEL McLANE TILTON, *Commanding Marines*.
FIRST LIEUTENANT C. A. DOYEN.

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THE SUPERINTENDENT.
THE COMMANDANT OF CADETS.
THE HEAD OF THE DEPARTMENT OF SEAMANSHIP.
THE HEAD OF THE DEPARTMENT OF ORDNANCE.
THE HEAD OF THE DEPARTMENT OF NAVIGATION.
THE HEAD OF THE DEPARTMENT OF STEAM ENGINEERING.
THE HEAD OF THE DEPARTMENT OF MECHANICS.
THE HEAD OF THE DEPARTMENT OF PHYSICS.
THE HEAD OF THE DEPARTMENT OF MATHEMATICS.
THE HEAD OF THE DEPARTMENT OF ENGLISH.
THE HEAD OF THE DEPARTMENT OF LANGUAGES.
THE HEAD OF THE DEPARTMENT OF DRAWING.

CADET OFFICERS OF THE UNITED STATES NAVAL ACADEMY.

CADET LIEUTENANT-COMMANDER,

W. G. DU BOSE.

CADET LIEUTENANT AND ADJUTANT,

J. W. POWELL.

CADET ENSIGN AND AID,

E. F. EGGERT.

CADET CHIEF PETTY OFFICER,

W. R. SEXTON.

CADET PASSED ASSISTANT ENGINEER,

F. L. SHEFFIELD.

CADET ASSISTANT ENGINEER,

G. WEBBER.

CADET LIEUTENANTS,

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MC CARTHY, A. H.,

REYNOLDS, W. H.,
YARNELL, H. E.

CADET JUNIOR LIEUTENANTS,

FALCONER, W. M.,
JONES, N. L.,

MURFIN, O. G.,
OVERSTREET, L. M.

CADET ENSIGNS,

MCDOWELL, W.,
PERRILL, H. P.,

SARGENT, L. R.,
BOYD, D. F., JR.

CADET PETTY OFFICERS OF THE FIRST CLASS,

First Division.

HOUSTON,
PRESSEY,
GRAEME,
KAUTZ.

Second Division.

MILLER,
HOLMAN,
KEMPF, F.
ASSERSON.

Third Division.

THELEN,
WILLIAMS, HILARY,
SMITH, A. ST. C., JR.,
HART.

Fourth Division.

HENDERSON,
CHASE,
DUNCAN,
GILES.

CADET PETTY OFFICERS OF THE SECOND CLASS,

First Division.

LANDIS,
PINNEY,
WILLIAMS, HENRY.
BOONE.

Second Division.

MAGILL,
OWENS, C. T.
CRONAN,
EVANS, F. T.

Third Division.

OWEN, A. C.
HALLIGAN,
NELSON,
WRIGHT, H. T.

Fourth Division.

WHITE, W. R.
WATTS,
SMITH, G. L.,
ELSON.

SUMMER CRUISE, 1896.

OFFICERS AND NAVAL CADETS.

UNITED STATES PRACTICE SHIP MONONGAHELA.

June 6 to August 28.

COMMANDER E. WHITE, *Commanding.*
 LIEUTENANT F. E. BEATTY, *Executive Officer.*
 LIEUTENANT C. J. BOUSH, *Navigator.*
 LIEUTENANT A. W. GRANT, *Watch Officer.*
 LIEUTENANT J. E. CRAVEN, *Watch Officer.*
 LIEUTENANT T. SNOWDEN, *Watch Officer.*
 LIEUTENANT P. W. HOURIGAN, *Watch Officer.*
 LIEUTENANT J. A. HOOGEWERFF, *Watch Officer.*
 ENSIGN E. MOALE, JR., *Watch Officer.*
 SURGEON C. BIDDLE.
 ASSISTANT SURGEON E. M. SHIPP.
 PASSED ASSISTANT PAYMASTER F. T. ARMS.
 CHAPLAIN A. L. ROYCE.

First Class—Line Division.

Asserson, W. C.	Henderson, R. W.	McDowell, W.	Sargent, L. B.
Boyd, D. F., jr.	Hepburn, A. J.	Magill, S. G., jr.	Sexton, W. R.
Chase, G.	Holman, F. R.	Miller, C. R.	Smith, A. St. C., jr.
Du Bose, W. G.	Hoopes, E. T.	Murfin, O. G.	Tholeen, D. E.
Duncan, O. D.	Houston, V. S.	Overstreet, L. M.	White, W. R.
Eggert, E. F.	Jones, N. L.	Owen, A. C.	Williams, Hilary
Falconer, W. M.	Kantz, A.	Perrill, H. P.	Yarnell, H. E.
Giles, W. P.	Kempff, C. S.	Powell, J. W.	
Gracene, J. W.	Landis, I. F.	Preasey, A. W.	
Hart, T. C.	McCarthy, A. H.	Reynolds, W. H.	

Second Class.

Abele, C. A.	Elson, H. J.	Macy, U. S.	Smith, G. L.
Babcock, J. F.	Evans, F. T.	Mannix, D. P.	Sweet, G. C.
Boone, C.	Gilmer, J. B.	Marble, R. N., jr.	Tardy, W. B.
Briggs, Z. E.	Halligan, J., jr.	Nelson, C. P.	Watts, W. C.
Brown, J. J.	Hand, J. A., jr.	Peterson, R. L.	Wells, W. B.
Brown, M. H.	Hanrahan, D. C.	Pettengill, G. T.	Williams, Henry
Cotten, L. A.	Huntington, A. F.	Pinney, F. L.	Woods E.
Cronan, W. P.	Johnson, T. L.	Roper, W. G.	Wright, H. T.
Dinger, H. C.	McIntyre, E. W.	Shane, L.	

Third Class

Bailey, J. E.	Branch, F. O.	Combs, J. R.	Forman, C. W.
Beckner, J. T.	Brinser, H. L.	Courtney, C. E.	Frawley, W. J.
Bisell, H. H.	Buchanan, A.	Dungan, P. B.	Gleason, H. M.
Bisset, G. A.	Buttrick, J. T.	Evans, H. H.	Greenalade, J. W.
Bloch, C. C.	Clement, J. W. L., jr.	Fenner, E. B.	Hatch, C. B., jr.
Bowers, J. T.	Cole, C. W.	Fischer, C. H.	Helm, F. P., jr.

Third Class—Continued.

Horne, F. J.	McCarty, S. H.	Sadler, E. J.	Vincent, R. W.
Hunt, W. M.	Major, S. I. M.	Sayles, W. R.	Watson, A. E.
Jeffers, W. N.	Mathews, J. E.	Shackford, C.	Weichert, E. A.
Johnson, A. W.	Miller, W. S.	Shapley, L. S.	West, A. S.
Kalbfus, E. C.	Morgan, C. E.	Smith, C. W.	White, R. D.
Kimberly, V. A.	Morrison, F.	Sparrow, H. G.	Wood, W. C.
Lackey, H. E.	Northup, A. W.	Taussig, J. K.	Woodward, C. H.
Larimer, E. B.	Pope, R. E.	Thomas, S. B.	Wyman, H. L.
Lewis, J. E.	Royall, H. H.	Tomb, J. H. ¹	Yates, F. H.

Fourth Class.

Case, W. S.	Cresap, E. O.	Kearny, P. d	Turner, R. F.
Cocke, H. C.	Doyle, S. H. R.		

¹ Transferred, sick, to hospital at Funchal, Madeira, July 17, 1896; returned to Naval Academy August 29, 1896.

d Dismissed August 26, 1896.

UNITED STATES PRACTICE SHIP BANCROFT.

*June 6 to August 26.*LIEUTENANT-COMMANDER B. F. TILLEY, *Commanding.*LIEUTENANT D. DANIELS, *Executive Officer.*LIEUTENANT J. M. ORCHARD, *Navigator.*LIEUTENANT H. PHELPS, *Watch Officer.*ENSIGN A. L. NORTON, *Watch Officer.*

PASSED ASSISTANT SURGEON A. M. D. MCCORMICK.

PASSED ASSISTANT ENGINEER H. O. STICKNEY.

ASSISTANT ENGINEER L. M. NULTON.

NAVAL CADETS.

First Class—Engineer Division.

Anding, S. W. ¹	Keenan, E. C.	Owens, C. T.	Sheffield, F. L.
Collins, H. L.	Leahy, W. D.	Pratt, P. L.	Van Orden, G.
Graham, A. T. ²	Mahony, D. S.	Richardson, L. C.	Webber, G.
Jenson, H. N.	Morse, J. W.	Roehle, C. C. ³	

Second Class.

Applewhite, S. C.	Faller, G. W.	Love, J. M., jr.	Tarrant, W. T.
Briggs, W. G.	Farrin, T. B.	Madison, Z. H., jr. ⁴	Thorpe, G. C. ⁴
Brockway, B. L.	Graham, J. S.	Mitchell, A. N.	Williams, Y. S.
Constien, E. T.	Kress, J. C.	Schofield, J. A.	

SYNOPSIS OF THE CRUISE, 1896.

MONONGAHELA.

Cadets, first class, line division; the second class; third class; and 6 members of the fourth class, embarked June 6.

Sailed from Annapolis for Funchal, Madeira, June 8.

Arrived at Funchal, Madeira, July 7.

Sailed from Funchal July 18.

Arrived at Lynnhaven Bay August 22.

Arrived at Annapolis August 28.

BANCROFT.

Cadets, first class, engineer division; and 15 cadets of the second class embarked June 6.

Sailed from Annapolis June 8.

Arrived at Newport News, Va., June 10. Sailed June 17.

Arrived at Chester, Pa., June 18. Sailed June 19.

Arrived at Philadelphia, Pa., June 19. Sailed July 6.

Arrived at Staten Island July 7. Sailed July 13.

Arrived at navy-yard, Brooklyn, July 13. Sailed July 28.

Arrived at Bridgeport July 28. Sailed July 30.

¹ Transferred sick to hospital, Brooklyn, July 14.

² Transferred sick to hospital, Brooklyn, July 8.

³ Transferred sick to hospital, Philadelphia, July 5.

⁴ Granted emergency leave August 6.

Arrived at New London July 30. Sailed August 1.
 Arrived at Newport August 1. Sailed August 7.
 Arrived at Boston Navy Yard August 8. Sailed August 10.
 Arrived at Bath, Me., August 10. Sailed August 12.
 Arrived at Portsmouth August 12. Sailed August 15.
 Arrived at New York August 16. Sailed August 17.
 Arrived at Lynnhaven Bay August 18. Sailed August 22.
 Arrived at Annapolis August 23.
 Cruise ended August 26.

PRACTICAL INSTRUCTION AT NAVAL ACADEMY.

Naval cadets of fourth class.....	84
On board practice ships <i>Monongahela</i> and <i>Bancroft</i>	161
Absent on sick leave.....	1

CLASSES OF THE NAVAL CADETS AT THE BEGINNING OF THE ACADEMIC YEAR, 1896-'97.

[Corrected to October 3, 1896.]

*Naval cadets of the class appointed in 1891, performing required service afloat—
Line Division—27 members.*

Order of gen- eral merit.	Name.	State from which appointed	Date of admission.
*1	Smith, Stuart Farrar	Pennsylvania	Sept. 4, 1891
*2	Greesbeck, William Gerard	Ohio	Sept. 4, 1891
3	Brumby, Frank Hardeman	Georgia	Sept. 4, 1891
4	Baldwin, Frank Pardee	New Jersey	Sept. 4, 1891
5	Davidson, William Christopher	South Dakota	Sept. 28, 1891
6	Laning, Harris	Illinois	May 19, 1891
7	Bannon, Philip Michael	Maryland	May 19, 1891
8	Chester, Arthur Tremaine	At large	May 19, 1891
9	Monaghan, John Robert	Washington	Sept. 7, 1891
10	Butler, Henry Varnum, jr	New York	Sept. 5, 1891
11	Walker, James Erling	North Carolina	Sept. 7, 1891
12	Cushman, William Reynolds	New York	Sept. 5, 1891
13	Todd, David Wooster	California	Sept. 5, 1891
14	Raby, James Joseph	Michigan	Sept. 9, 1891
15	Standley, William Harry	California	Sept. 7, 1891
16	Gherardi, Walter Rockwell	At large	Sept. 4, 1891
17	Klemann, John Valentine	New York	Sept. 10, 1891
18	Bennett, Kenneth Marratt	New Jersey	Sept. 9, 1891
19	McCormack, Michael James	Michigan	Sept. 9, 1891
20	Bagley, Worth	North Carolina	Sept. 7, 1891
21	Wadhams, Albion James	New York	Sept. 4, 1891
22	Barnes, Cassius Bartlett	Oklahoma	Sept. 7, 1891
23	Watson, Edward Howe	Kentucky	Sept. 7, 1891
24	Breckinridge, Joseph Cabell	Kentucky	Sept. 9, 1891
25	Knepper, Orio Smith	Pennsylvania	Sept. 4, 1891
26	Hall, Newt Hamill	Texas	Sept. 7, 1891
27	Johnston, Rufus Zenas, jr	North Carolina	Sept. 10, 1891

Engineer Division—12 members.

1	Dick Thomas Merritt	South Carolina	Sept. 5, 1891
2	Mallory Charles King	Tennessee	Sept. 28, 1891
3	Mansfield, Newton	Ohio	Sept. 7, 1891
4	Garrison, Daniel Mershon	New Jersey	June 1, 1891
5	Karns Franklin D	Ohio	Sept. 28, 1891
6	Morton, James Proctor	Missouri	Sept. 9, 1891
7	Freeman, Frederick Newton	Indiana	Sept. 9, 1891
8	Walker, Charles Henry	Massachusetts	Sept. 9, 1891
9	Marshall, John Francis, jr	Texas	Sept. 9, 1891
10	Merritt, Darwin Robert	Iowa	Sept. 28, 1891
11	Dunn, Edward Howard	Connecticut	Sept. 5, 1891
12	Eckhardt, Ernest Frederick	Wisconsin	Sept. 5, 1891

* NOTE.—Pursuing special studies abroad.

*Naval cadets of the class appointed in 1892, performing required service afloat—
Line Division—26 members.*

Order of gen- eral merit.	Name.	State from which appointed.	Date of admission.
* 1	Robinson, Richard Hallett.....	Ohio.....	Sept. 6, 1892
2	Holden, Jonas Hannibal.....	Vermont.....	May 20, 1892
3	Craven, Thomas Tingey.....	New Hampshire.....	Sept. 19, 1892
4	Poor, Charles Longstreet.....	New York.....	Sept. 6, 1892
5	Earle, Ralph.....	Massachusetts.....	Sept. 6, 1892
6	Kalbach, Andrew Edwin.....	Pennsylvania.....	July 1, 1892
7	Walker, Ralph Eric.....	Indiana.....	May 20, 1892
8	Wurtsbaugh, Daniel Wilbert.....	Texas.....	May 20, 1892
9	Wettengel, Ivan Cyrus.....	Colorado.....	Sept. 6, 1892
10	Tozer, Charles Maxson.....	New York.....	Sept. 19, 1892
11	Cluverius, Wat Tyler, jr.....	Louisiana.....	May 20, 1892
R 12	Kimball, Henry Swift.....	Massachusetts.....	Sept. 6, 1892
13	Wood, Duncan Mahon.....	Alabama.....	Sept. 30, 1892
14	Palmer, Leigh Carlyle.....	Missouri.....	Sept. 6, 1892
15	Kearney, Thomas Albert.....	Missouri.....	Sept. 6, 1892
16	MacArthur, Arthur, jr.....	Wisconsin.....	Sept. 6, 1892
17	Ridgely, Frank Eugene.....	At large.....	Sept. 6, 1892
18	Knox, Dudley Wright.....	Tennessee.....	Sept. 6, 1892
19	Gilpin, Charles Edward.....	Michigan.....	Sept. 6, 1892
20	Ellis, Mark Saint Clair.....	Arkansas.....	July 1, 1892
21	McCauley, Edward, jr.....	New York.....	Oct. 10, 1892
22	Jessop, Earl Percy.....	West Virginia.....	Sept. 6, 1892
23	Roy, John Holley.....	New York.....	Sept. 6, 1892
24	Mustin, Henry Croskey.....	Tennessee.....	Sept. 6, 1892
25	Curtin, Roland Irvin.....	Pennsylvania.....	Sept. 6, 1892
26	Bronson, Amon, jr.....	Nebraska.....	Sept. 30, 1892

Engineer Division—12 members.

* 1	Leiper, Charles Lewis.....	Pennsylvania.....	Sept. 6, 1892
2	Lincoln, Gatewood Sanders.....	Missouri.....	May 20, 1892
3	Fitzgerald, Edward Thomas.....	Texas.....	Sept. 13, 1892
4	Bisset, Henry Overstreet.....	Maryland.....	Sept. 6, 1892
5	Marshall, Albert Ware.....	Texas.....	Sept. 6, 1892
6	Burt, Charles Perry.....	Georgia.....	Sept. 6, 1892
7	Castleman, Kenneth Galleher.....	Kentucky.....	Sept. 6, 1892
8	Littlefield, William Lord.....	Massachusetts.....	Sept. 30, 1892
9	Washington, Pope.....	North Carolina.....	Sept. 7, 1892
10	Rice, George Benjamin.....	Kentucky.....	Sept. 6, 1892
11	Henry, James Buchanan, jr.....	New York.....	Sept. 6, 1892
12	Crenshaw, Arthur.....	Alabama.....	Sept. 6, 1892

R Resigned after successfully completing the four years' course.

Naval Cadets of the First Class—Line Division—57 members.

Name.	State from which appointed.	Date of admission.	Sea service in previous ships.	
			Months.	Days.
Amerson, William Christian	New York	Sept. 25, 1893	0	0
Boyd, David French, jr.	Alabama	May 19, 1893	0	25
Chase, Gilbert	Virginia	Sept. 6, 1893	0	20
Du Bose, William Gunnell	Georgia	Sept. 6, 1893	0	15
Duncan, Oscar Dibble	Alabama	Sept. 6, 1893	0	20
Eggert, Ernest Frederick	Michigan	Sept. 6, 1893	0	20
Falconer, Walter Maxwell	Ohio	Sept. 6, 1893	0	15
Giles, William Pinkney	Texas	May 20, 1893	0	25
Graeme, Joseph Wright	Pennsylvania	Sept. 6, 1893	0	20
Hart, Thomas Charles	Michigan	May 19, 1893	0	25
Henderson, Robert William	Ohio	Sept. 22, 1893	0	0
Hepburn, Arthur Japy	Pennsylvania	Sept. 22, 1893	0	0
Holman, Frederic Ralph	Iowa	May 19, 1893	0	25
Hoopes, Edward Trimble	Pennsylvania	Sept. 6, 1893	0	0
Houston, Victor Stuart	South Dakota	Sept. 22, 1893	0	15
Jones, Needham Lee	Mississippi	Sept. 6, 1893	0	20
Kants, Austin	Washington	May 19, 1893	0	25
Kempff, Clarence Selby	California	May 19, 1893	0	25
Landis, Irwin Franklin	Kansas	Sept. 6, 1893	0	20
McCarthy, Albert Henry	Iowa	Sept. 6, 1893	0	0
McDowell, Willis	Pennsylvania	May 19, 1893	0	25
Magill, Samuel George, jr.	North Dakota	May 19, 1893	0	25
Miller, Cyrus Robinson	California	Sept. 6, 1893	0	20
Murfin, Orin Gould	Ohio	Sept. 6, 1893	0	20
Overstreet, Luther Martin	Nebraska	Sept. 6, 1893	0	15
Owen, Alfred Crosby	District of Columbia	Sept. 6, 1893	0	20
Owens, Charles Truendale	Pennsylvania	Sept. 6, 1893	0	25
Perrill, Harlan Page	Indiana	Sept. 6, 1893	0	0
Powell, Joseph Wright	New York	May 19, 1893	0	25
Preney, Alfred Warren	Nebraska	May 19, 1893	0	10
Reynolds, William Herbert	Georgia	Sept. 6, 1893	0	0
Sargent, Leonard Rundlett	Minnesota	Sept. 6, 1893	0	20
Sexton, Walton Roswell	Illinois	May 19, 1893	0	25
Smith, Arthur St. Clair, jr.	Iowa	Sept. 6, 1893	0	20
Theisen, David Elias	Wisconsin	Sept. 6, 1893	0	20
White, William Russell	Arizona	Sept. 6, 1893	0	20
Williams, Hilary	Indiana	Sept. 6, 1893	0	0
Yarnell, Harry Ervin	Iowa	Sept. 6, 1893	0	0

Engineer Division—14 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
*Anding, Sheldon Webb	Mississippi	May 19, 1898	6	28
Collins, Henry Lafayette	Pennsylvania	Sept. 6, 1898	5	28
*Graham, Andrew Thomas	Illinois	Sept. 6, 1898	5	28
Jenson, Henry Norman	Wisconsin	Sept. 6, 1898	5	27
Keenan, Ernest Clinton	New York	Sept. 6, 1898	5	28
Leahy, William Daniel	Wisconsin	May 19, 1898	8	23
Mahony, Daniel Sullivan	Michigan	Sept. 6, 1898	5	28
Morse, John Wise	Massachusetts	Sept. 6, 1898	5	28
Pratt, Peter Lloyd	Illinois	May 19, 1898	8	24
Richardson, Louis Clark	South Carolina	Sept. 6, 1898	5	27
*Roehle, Clifton Charles	Maryland	Sept. 6, 1898	4	6
Sheffield, Fletcher Lamar	Georgia	Sept. 6, 1898	5	28
Van Orden, George	Michigan	May 19, 1898	8	25
Webber, George	Arkansas	Sept. 6, 1898	5	27

* Transferred July 8, sick, from Bancroft to Naval Hospital, Brooklyn.

S Transferred July 5 from Bancroft to Naval Hospital, Philadelphia; died July 14, 1898.

Naval Cadets of the Second Class—50 members.

Name.	State from which appointed.	Date of admission.	Remained in practice ship.	
			Months	Days
Abele, Clarence Arthur	Massachusetts	Sept. 6, 1894	5	17
Applewhite, Scott Carter	Indiana	May 19, 1894	9	6
Babcock, John Franklin	New York	Sept. 22, 1894	5	13
Boone, Charles	Ohio	Sept. 6, 1894	5	13
Briggs, Wilbur Gerheart	New York	Sept. 6, 1894	5	13
Briggs, Zeno Everett	Nebraska	Sept. 22, 1894	5	13
Brockway, Benjamin Little	South Carolina	Sept. 6, 1894	5	13
Brown, Josephus Jarvis	Illinois	Sept. 6, 1894	5	13
Brown, Morris Hamilton	Indiana	May 19, 1894	9	6
Constien, Edward Theodore	Pennsylvania	May 19, 1894	9	6
Cotten, Lyman Atkinson	North Carolina	Sept. 6, 1894	5	13
Cronan, William Pigott	Connecticut	Sept. 6, 1894	5	13
Dinger, Henry Charles	Wisconsin	May 19, 1894	9	6
Eason, Herman Jacob	Mississippi	May 19, 1894	9	6
Evans, Frank Taylor	At large	Sept. 6, 1894	5	13
Faller, Guy William	Wisconsin	May 19, 1894	9	6
Farrin, Thomas Benjamin, jr.	Illinois	Sept. 22, 1894	5	13
Gilmer, James Blair	Virginia	May 19, 1894	9	6
Graham, John Slason	Colorado	May 19, 1894	9	6
Halligan, John, jr.	Massachusetts	Sept. 6, 1894	5	13
Hand, James Alexander, jr.	South Dakota	Sept. 6, 1894	5	13
Hanrahan, David Carlisle	Wisconsin	May 19, 1894	9	6
Huntington, Arthur Franklin	New York	Sept. 12, 1894	5	13
Johnson, Thomas Lee	Kansas	May 19, 1894	9	6
Kress, James Chatham	Pennsylvania	Sept. 6, 1894	5	13
Love, James Monroe, jr.	Virginia	Sept. 6, 1894	5	13
McIntyre, Edward William	California	Sept. 6, 1894	5	13
Macy, Ulysses Samuel	Missouri	Sept. 6, 1894	5	13
Madison, Zachariah Harvey	Illinois	Sept. 6, 1894	5	13
Mannix, Daniel Pratt	Ohio	Sept. 6, 1894	5	13
Marble, Ralph Norris, jr.	Minnesota	May 19, 1894	9	6
Mitchell, Alexander Neely	Ohio	Sept. 6, 1894	5	13
Nelson, Charles Preston	Massachusetts	May 19, 1894	9	6
Peterson, Roscoe Lloyd	Michigan	June 1, 1894	9	6
Pottengill, George Tilford	Idaho at large	Sept. 22, 1894	5	13
Pinney, Frank Lucius	Connecticut	Sept. 6, 1894	5	13
Roper, Walter Gordon	Georgia	Sept. 22, 1894	5	13
Schofield, John Anderson	Missouri	Sept. 6, 1894	5	13
Shane, Louis	Nebraska	Sept. 6, 1894	5	13
Smith, George Leonard	New Hampshire	Sept. 6, 1894	5	13
Sweet, George Cook	New York	Sept. 22, 1894	5	13
Tardy, Walter Benjamin	Arkansas	May 19, 1894	9	6
Tarrant, William Theodore	Texas	Sept. 6, 1894	5	13
Thorp, George Cyrus	Minnesota	May 19, 1894	9	6
Watts, William Carleton	Pennsylvania	Sept. 22, 1894	5	13
Wells, William Benedict	Iowa	May 19, 1894	9	6
Williams, Henry	Maryland	Sept. 6, 1894	5	13
Williams, Yancey Sullivan	South Carolina	Sept. 6, 1894	5	13
Woods, Edward	Massachusetts	May 19, 1894	9	6
Wright, Henry Tutwiler	Alabama	Sept. 6, 1894	5	13

* Transferred July 4 from Bancroft to Naval Hospital, Brooklyn.

† Dropped September 2, 1894.

‡ Deficient, recommended for re-examination; sick, absent; subject to examination.

Naval Cadets of the Third Class—60 members.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
Bailey, John Eliot	Michigan	May 20, 1895	5	15
Beckner, John Taliaferro	Kentucky	May 20, 1895	5	15
Bissell, Henry Harrison	New York	May 20, 1895	5	17
Bisset, Guy Aloysius	Kentucky	Sept. 6, 1895	2	22
Bloch, Claude Charles	Kentucky	Sept. 6, 1895	2	22
Bowers, John Treadwell	New Jersey	Sept. 6, 1895	2	22
Branch, Frank Oak	Indiana	Sept. 6, 1895	2	22
Brinser, Harry Lerch	Pennsylvania	Sept. 6, 1895	2	22
Buchanan, Allen	Indiana	Sept. 6, 1895	2	22
Buttrick, James Tyler	Rhode Island	Sept. 6, 1895	2	22
Clement, James Wilkinson Legare, jr.	South Carolina	Sept. 27, 1895	2	22
Cole, Cyrus Willard	Ohio	Sept. 6, 1895	2	22
Combs, James Rockwell	Illinois	Sept. 6, 1895	2	22
Courtney, Charles Edward	New York	May 20, 1895	5	15
Dungan, Paul Baxter	Nebraska	Sept. 6, 1895	2	22
Evans, Herbert Heard	Mississippi	Sept. 6, 1895	2	22
Fenner, Edward Blaine	New York	May 20, 1895	5	15
Fischer, Charles Hermann	Pennsylvania	Sept. 6, 1895	2	22
Forman, Charles William	Illinois	Sept. 6, 1895	2	22
Frawley, William John	Massachusetts	May 20, 1895	5	15
Gleason, Henry Miller	Kansas	May 20, 1895	5	15
Greenalade, John Wills	Ohio	May 20, 1895	5	15
Hatch, Charles Byron, jr.	Illinois	Sept. 6, 1895	2	22
Helm, Frank Pinckney, jr.	Kentucky	May 20, 1895	5	15
Horne, Frederick Joseph	New York	May 20, 1895	5	15
Hunt, Walter Merrill	Maine	Sept. 6, 1895	2	22
Jeffers, William Nicholson	New York	Sept. 20, 1895	2	22
Johnson, Alfred Wilkinson	At large	May 20, 1895	5	15
Kalbfus, Edward Clifford	At large	May 20, 1895	5	15
Kimberly, Victor Ashfield	Massachusetts	Sept. 6, 1895	2	22
Lackey, Henry Ellis	At large	May 20, 1895	5	15
Larimer, Edgar Brown	Kansas	Sept. 6, 1895	2	22
Lewis, John Earl	Minnesota	Sept. 6, 1895	2	22
McCarty, Sterling Hicks	Missouri	Sept. 6, 1895	2	22
Major, Samuel Ira Monger	Kentucky	Sept. 6, 1895	2	22
Mathews, James Edward	Illinois	May 20, 1895	5	15
Miller, William Siebel	Texas	Sept. 20, 1895	2	22
Morgan, Charles Elmer	West Virginia	Sept. 6, 1895	2	22
Morrison, Farmer	Arkansas	Sept. 6, 1895	2	22
Northup, Arthur Weed	Ohio	Sept. 6, 1895	2	22
Pope, Ralph Elton	Nebraska	May 20, 1895	5	15
Royall, Hilary Herbert	Alabama	May 20, 1895	5	15
Sadler, Everit Jay	Kansas	Sept. 20, 1895	2	22
Sayles, William Randall	Rhode Island	May 20, 1895	5	15
Shackford, Chauncey	New Jersey	Sept. 6, 1895	2	22
Shapley, Lloyd Stowell	Missouri	May 20, 1895	5	15
Smith, Clyde Wilbur	Iowa	Sept. 6, 1895	2	22
Sparrow, Herbert George	Ohio	Sept. 6, 1895	2	22
Tausdg, Joseph Kneifer	At large	May 20, 1895	5	15
Thomas, Samuel Brown	At large	May 20, 1895	5	15

Naval Cadets of the Third Class—60 members—Continued.

Name.	State from which appointed.	Date of admission.	Sea service in practice ships.	
			Months.	Days.
*Tomb, James Harvey	Missouri	Sept. 6, 1895	1	11
Vincent, Roe Willis	Pennsylvania	Sept. 6, 1895	2	29
Watson, Adolphus Eugene	At large	May 20, 1895	5	15
Weichert, Ernest Augustus	Connecticut	Sept. 6, 1895	2	22
West, Arthur Stuart	Georgia	May 20, 1895	5	26
White, Richard Drace	Missouri	May 20, 1895	5	15
Wood, Welborn Cleoro	Georgia	Sept. 6, 1895	2	22
Woodward, Clark Howell	Georgia	Sept. 6, 1895	2	22
Wyman, Henry Lake	Illinois	Sept. 6, 1895	2	22
Yates, Fred Hammond	Maine	May 20, 1895	5	25

* Transferred July 17 from Monongahela to Hospital, Funchal.

Naval Cadets of the Fourth Class—97 members.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
Abernathy, Robert Andrew	Tennessee	Sept. 5, 1896	16	1	0	0
Arnold, Clarence Lamont	Indiana	Sept. 5, 1896	18	0	0	0
Asmus, Allston	New York	Sept. 5, 1896	16	0	0	0
Bartholow, Benjamin Grady	Ohio	Sept. 5, 1896	18	6	0	0
Berrien, Frank Dunn	Iowa	Sept. 5, 1896	19	0	0	0
Berry, Robert Lawrence	Kentucky	May 20, 1896	15	9	0	0
Blair, George Fred.	Michigan	Sept. 5, 1896	16	1	0	0
Boardman, William Henry	Massachusetts	Sept. 5, 1896	19	10	0	0
Brackett, William	Illinois	Sept. 5, 1896	15	8	0	0
Bricker, William Franklin	Pennsylvania	Sept. 19, 1896	17	8	0	0
Browne, Claude	Alabama	Sept. 5, 1896	17	6	0	0
Bryant, Samuel Wood	Pennsylvania	Sept. 5, 1896	19	8	0	0
Bulmer, Bayard Taylor	Nevada, at large	Sept. 5, 1896	19	9	0	0
Caffery, John Murphy	Louisiana	Sept. 5, 1896	18	11	0	0
Cage, Harry Kimball	Texas	May 20, 1896	16	8	0	0
Case, William Stanhope	Illinois	Sept. 6, 1896	18	0	2	28
Catron, John Wals.	New Mexico	Sept. 5, 1896	17	7	0	0
Church, John Gaylord	Ohio	May 20, 1896	17	1	0	0
Clark, Arthur William	California	Sept. 19, 1896	17	11	0	0
Cooke, Herbert Claiborne	Virginia	May 20, 1896	18	4	5	15
Comfort, James Hall	Missouri	May 20, 1896	19	6	0	0
Cox, Lewis Smith, jr.	Pennsylvania	May 20, 1896	16	2	0	0
Cressap, Edward Otho	Florida	May 20, 1896	18	6	5	15
Crittenden, Kirby Barnes	Missouri	Sept. 5, 1896	17	5	0	0
Day, Charles Conwell	Indiana	Sept. 5, 1896	18	8	0	0
Dearborn, Peyton Brown	Virginia	Sept. 5, 1896	16	9	0	0
Defrees, Joseph Bollie	Illinois	May 20, 1896	19	11	0	0
Dodd, Edwin Horace	Illinois	Sept. 5, 1896	17	0	0	0
Downes, John, jr.	At large	June 3, 1896	16	6	0	0
Doyle, Stafford Henry Rahall	South Carolina	May 20, 1896	20	0	2	28
Draper, Arthur Edgar	Kansas	Sept. 19, 1896	18	9	0	0
Ellis, Hayne	Georgia	Sept. 5, 1896	19	0	0	0
Embody, Josiah Waterhouse	Pennsylvania	Sept. 5, 1896	19	9	0	0
Ferguson, William Burden, jr.	North Carolina	May 20, 1896	18	0	0	0
Fitzpatrick, John James	Louisiana	Sept. 5, 1896	16	7	0	0
Foley, Paul	New York	Sept. 5, 1896	18	3	0	0
Foots, Percy Wright	North Carolina	Sept. 5, 1896	17	0	0	0
Fowler, Orle Walter	Iowa	Sept. 5, 1896	18	1	0	0
Freeman, Charles Seymour	Pennsylvania	Sept. 5, 1896	17	9	0	0
Gannon, Sinclair	Texas	June 3, 1896	19	2	0	0
Gardiner, Carlos Alfonso	Illinois	May 20, 1896	16	7	0	0
Harris, George Simmons	Georgia	Sept. 5, 1896	15	7	0	0
Hellweg, Julius Frederick	Maryland	Sept. 5, 1896	17	5	0	0
Howard, Abram Claude	Illinois	Sept. 5, 1896	16	5	0	0
Huff, Charles Peabody	Missouri	Sept. 5, 1896	19	4	0	0
Hullok, Olive Kelsey	Ohio	Sept. 5, 1896	17	1	0	0
Hyland, John Joseph	Massachusetts	Sept. 19, 1896	18	5	0	0
Jackson, Edward Sharpless	Pennsylvania	May 22, 1896	18	3	0	0
James, John Frederick	Virginia	Sept. 5, 1896	18	6	0	0
Johnston, Huntington	Oregon	Sept. 19, 1896	18	9	0	0

Naval Cadets of the Fourth Class—97 members—Continued.

Name.	State from which appointed.	Date of admission.	Age at date of admission.		Sea service in practice ships.	
			Years.	Months.	Months.	Days.
Kear, Carleton Romig	Ohio	May 20, 1896	16	2	0	0
d Kearny, Philip	Missouri	May 20, 1896	18	4	2	20
Keating, Arthur Barnes	Maryland	Sept. 19, 1896	17	2	0	0
Landenberger, George Bertram	Pennsylvania	May 20, 1896	17	1	0	0
Landram, Clarence Elmer	Kentucky	Sept. 5, 1896	16	7	0	0
McEntee, William	Minnesota	May 20, 1896	19	0	0	0
Mann, John Ferris	New York	Sept. 5, 1896	19	4	0	0
Menner, Robert Tryon	Pennsylvania	Sept. 5, 1896	19	11	0	0
Miles, Harold Bancroft	Wyoming, at large	May 20, 1896	19	11	0	0
Miller, Benjamin Franklin	Virginia	Sept. 5, 1896	16	1	0	0
Mitchell, Willis Gemmill	Pennsylvania	Sept. 5, 1896	18	11	0	0
Morris, Robert	Utah, at large	Sept. 5, 1896	17	9	0	0
Naile, Frederick Raymonde	Pennsylvania	Sept. 5, 1896	16	2	0	0
Noa, Loveman	Tennessee	Sept. 5, 1896	17	11	0	0
O'Reilly, Philip Maitland	Pennsylvania	June 2, 1896	16	7	0	0
Osterhaus, Hugo Wilson	Virginia	May 20, 1896	16	6	0	0
Pye, William Batterlee	Minnesota	Sept. 5, 1896	16	2	0	0
Rhea, Robert Yancey	Kentucky	May 20, 1896	16	11	0	0
Rhue, John Alonzo	Indiana	Sept. 5, 1896	19	8	0	0
Riddle, William King	Tennessee	Sept. 5, 1896	19	8	0	0
d Roberts, Charles Verner	New York	June 2, 1896	16	7	0	0
Roosevelt, Henry Latrobe	New York	July 6, 1896	16	8	0	0
Russell, Branch Elliott	Wisconsin	May 20, 1896	16	4	0	0
Schoenfeld, John William	New York	July 6, 1896	19	11	0	0
Scranton, Edison Ernest	Ohio	May 20, 1896	19	3	0	0
Shra, William Henry	New York	May 20, 1896	18	9	0	0
Sloan, James Muir, jr.	Maryland	May 20, 1896	16	4	0	0
Smith, Wilbert	Michigan	July 6, 1896	19	8	0	0
Snyder, Charles Philip	West Virginia	May 20, 1896	16	10	0	0
Spliman, John Armistead	Virginia	May 20, 1896	16	1	0	0
Steele, George Washington, jr.	Indiana	June 2, 1896	16	11	0	0
Svars, Emil Pravoslav	Texas	May 20, 1896	19	1	0	0
Tamura, Hiroaki	Empire of Japan	May 25, 1896	17	6	0	0
Thompson, Scott McGehee	Florida	Sept. 5, 1896	19	7	0	0
Timmons, John Wesley	Ohio	June 2, 1896	17	10	0	0
Tomb, William Victor	Arkansas	Sept. 5, 1896	18	11	0	0
Train, Charles Russell	New York	Sept. 5, 1896	16	11	0	0
Turner, Robert Francis	Iowa	Sept. 6, 1896	19	8	2	2
Vernon, Walter Newhall	Oregon	Sept. 5, 1896	16	6	0	0
Wade, Charles Tobias	New Jersey	Sept. 5, 1896	16	11	0	0
Wainwright, John Drayton	Delaware, at large	Sept. 19, 1896	16	2	0	0
Winston, Hollis Taylor	North Carolina	Sept. 5, 1896	16	10	0	0
Wood, Robert Thompson	New York	Sept. 5, 1896	17	4	0	0
Woods, Stanley	Illinois	May 20, 1896	15	6	0	0
Wortman, Ward Kenneth	Montana, at large	Sept. 5, 1896	16	7	0	0
Wright, Luke Edward, jr.	Tennessee	Sept. 5, 1896	19	3	0	0
Zigbaum, Rufus Fairchild, jr.	New York	May 20, 1896	16	11	0	0

d Dismissed.

Summary of Cadets at the United States Naval Academy, October, 1896.

First class—		Members.
Line Division.....		38
Engineer Division		13
		— 51
Second class.....		49
Third class		60
Fourth class.....		95
		—
Total.....		255

5633—3

RELATIVE STANDING OF NAVAL CADETS FOR 1895-'96.

Classes of the Naval Cadets, at the United States Naval Academy, at the close of the Academic Year 1895-'96; with the relative standing of the members in each class, as determined at the Annual Examination, June, 1896.

P Physically disqualified for the naval service.

R Resigned after successfully completing the four years' course.

* Received 85 per cent of the multiple.

† Found deficient, allowed a reexamination, passed, and continued with class.

‡ Found deficient and recommended to be dropped.

¶ Retained in next lower class.

α Absent from examination.

d Dismissed.

e Selected for Engineer Division.

f Deficient, continued with class.

m Deficient; recommended for reexamination; resigned.

n Deficient; recommended for reexamination; sick and absent.

r Resigned.

s Sick.

w Found deficient, warned.

Relative standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission.	Age at date of admission.	
				Years.	Months.
26	Bronson, Amon, jr	Nebraska	Sept. 30, 1902	16	.
12	Cluverius, Wat Tyler, jr	Louisiana	May 20, 1902	17	.
3	Craven, Thomas Tingey	New Hampshire	Sept. 19, 1902	19	.
24	Curtin, Roland Irvin	Pennsylvania	Sept. 6, 1902	16	.
4	Earle, Ralph	Massachusetts	Sept. 6, 1902	16	.
22	Ellis, Mark Saint Clair	Arkansas	July 1, 1902	19	.
28	Gilpin, Charles Edward	Michigan	Sept. 6, 1902	19	.
8	Holden, Jonas Hannibal	Vermont	May 20, 1902	19	.
21	Jessop, Earl Percy	West Virginia	Sept. 6, 1902	19	.
5	Kalbach, Andrew Edwin	Pennsylvania	July 1, 1902	19	.
16	Kearney, Thomas Albert	Missouri	Sept. 6, 1902	17	.
13	Kimball, Henry Swift	Massachusetts	Sept. 6, 1902	16	.
14	Knox, Dudley Wright	Tennessee	Sept. 6, 1902	15	.
15	MacArthur, Arthur, jr	Wisconsin	Sept. 6, 1902	16	.
19	McCauley, Edward, jr	New York	Oct. 10, 1902	17	.
25	Mustin, Henry Croakey	Tennessee	Sept. 6, 1902	16	.
17	Palmer, Leigh Carlyle	Missouri	Sept. 6, 1902	19	.
6	Poor, Charles Longstreet	New York	Sept. 6, 1902	19	.
18	Ridgely, Frank Eugene	At large	Sept. 6, 1902	17	.
*1	Robbass, Richard Hallett	Ohio	Sept. 6, 1902	17	.
20	Roya, John Halley	New York	Sept. 6, 1902	15	.
11	Toner, Charles Maxson	New York	Sept. 19, 1902	16	.
10	Walker, Ralph Eric	Indiana	May 20, 1902	16	.
8	Wettengel, Ivan Cyrus	Colorado	Sept. 6, 1902	16	.
9	Wood, Duncan Mahon	Alabama	Sept. 20, 1902	15	.
7	Wurtabaugh, Daniel Wilbert	Texas	May 20, 1902	19	.

R Resigned after successfully completing the four years' course.

Line Division—26 members—Annual Examination, June, 1896.

Order of merit in—											Number of demerits.	Sea service in practice ships.		Order of annual merit.
Seamanship, naval construction, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Efficiency.	Conduct.		Months.	Days.	
26	26	23	26	26	17	23	22	23	20	26	96	4	22	26
8	18	15	14	16	13	7	4	8	16	8	24	10	7	12
3	6	3	9	17	3	5	5	14	1	4	16	7	15	2
20	22	25	25	19	24	21	23	17	21	23	68	7	15	24
4	8	3	2	5	8	11	3	5	18	2	10	7	15	4
23	26	19	22	14	20	20	18	3	19	19	54	8	19	22
25	10	20	17	25	25	24	26	26	11	14	39	7	15	23
2	3	5	8	8	7	6	11	10	3	3	14	10	7	3
17	20	21	23	13	26	19	14	23	16	14	39	7	15	21
6	12	10	4	6	4	8	17	1	13	8	24	8	17	5
15	1	22	19	15	11	18	7	11	6	6	18	7	15	16
13	10	13	6	24	19	16	20	21	6	7	23	7	15	13
10	22	11	15	4	21	17	16	24	10	10	26	7	7	14
14	14	7	17	11	21	12	19	9	25	18	44	7	15	15
22	7	16	16	9	17	25	21	25	6	13	34	7	15	19
21	9	25	24	23	10	26	24	20	15	25	95	7	15	25
17	16	16	12	1	15	22	9	15	5	21	62	7	15	17
7	12	9	10	6	8	4	6	12	11	11	27	7	15	6
19	17	23	21	11	16	14	13	6	4	12	29	7	15	18
1	4	1	1	2	1	1	2	7	2	1	8	7	15	*1
24	20	14	19	10	23	9	10	15	14	24	76	7	15	20
12	14	12	11	25	2	12	14	3	23	17	40	7	15	11
9	19	16	6	20	5	2	12	13	26	14	39	10	7	10
10	5	6	8	21	14	14	1	2	22	20	60	7	15	8
5	24	2	13	21	11	8	25	19	24	22	65	7	15	9
15	1	8	4	3	6	10	8	18	9	5	17	10	7	7

Relative standing of the Naval Cadets of the First Class—

Order of annual merit.	Name.	State from which appointed.	Date of admission	Age at date of admission.	
				Years	Months
9	Blaset, Henry Overstreet.....	Maryland	Sept. 6, 1882	20	3
5	Burt, Charles Perry	Georgia	Sept. 6, 1882	17	2
6	Castleman, Kenneth Galleher.....	Kentucky	Sept. 6, 1882	20	3
10	Crenshaw, Arthur.....	Alabama	Sept. 6, 1882	17	6
2	Fitzgerald, Edward Thomas.....	Texas.....	Sept. 12, 1882	17	..
12	Henry, James Buchanan, jr.....	New York.....	Sept. 6, 1882	20	9
•1	Leiper, Charles Lewis.....	Pennsylvania	Sept. 6, 1882	20	6
3	Lincoln, Gatewood Sanders.....	Missouri.....	May 20, 1882	26	9
7	Littlefield, William Lord.....	Massachusetts	Sept. 20, 1882	20	9
4	Marshall, Albert Ware.....	Texas.....	Sept. 6, 1882	18	3
8	Rice, George Benjamin.....	Kentucky	Sept. 6, 1882	19	6
11	Washington, Pope.....	North Carolina	Sept. 7, 1882	20	1.

Engineer Division—12 members—Annual Examination, June, 1896.

Sea service.		Order of merit in—											Number of demerits.	Order of annual merit.
Months.	Days.	Naval construction.	Designing machinery.	Marine engines.	Boilers.	Experimental engineering.	Summer practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Efficiency.	Conduct.		
7	15	6	8	6	11	10	11	4	6	6	13	7	57	9
6	4	7	3	5	4	3	7	5	2	3	5	10	88	5
4	26	3	6	7	7	6	2	9	8	8	4	9	75	6
6	4	13	12	11	9	10	9	9	11	9	9	8	72	10
6	4	2	2	3	3	4	4	3	7	1	1	1	16	2
6	4	10	11	10	12	12	9	12	12	11	11	11	105	12
6	4	1	1	1	1	1	5	1	1	4	1	1	16	* 1
8	26	3	4	2	2	5	6	2	3	7	5	6	52	3
5	26	8	7	8	6	8	2	8	5	10	7	3	39	7
6	4	5	5	4	5	2	1	6	4	2	3	4	43	4
6	4	9	10	9	8	7	8	7	9	12	8	5	51	8
6	4	11	8	12	10	9	11	11	10	5	10	12	115	11

Relative standing of the Naval Cadets of the Service

Order of annual merit	Name	State from which appointed	Date of admission
43	Anding, Sheldon Webb	Mississippi	May 19 1901
5	Amereson, William Christian	New York	Sept 22 1901
6	Bagby, Robert Coleman	Missouri	Sept 22 1901
20	Boyd, David French, jr	Alabama	May 19 1901
5	Bryant, Samuel Wood	Pennsylvania	May 19 1901
21	Chase, Gilbert	Virginia	Sept 2 1901
41	Collins, Henry Lafayette	Pennsylvania	Sept 2 1901
5	Day, John Arthur	New York	May 19 1901
22	De Bess, William Cunnell	Georgia	Sept 2 1901
23	Duncan, Oscar Dibble	Alabama	Sept 2 1901
51	Egypt, Ernest Frederick	Michigan	Sept 2 1901
20	Falconer, Walter Maxwell	Ohio	Sept 2 1901
25	Giles, William Pinkney	Texas	May 20 1901
27	Grimes, Joseph Wright	Pennsylvania	Sept 2 1901
48	Graham, Andrew Thomas	Illinois	Sept 2 1901
13	Hart, Thomas Charles	Michigan	May 19 1901
2	Henderson, Robert William	Ohio	Sept 22 1901
6	Hepburn, Arthur Japy	Pennsylvania	Sept 22 1901
26	Holman, Frederic Ralph	Iowa	May 19 1901
44	Hoopce, Edward Trimble	Pennsylvania	Sept 2 1901
39	Houston, Victor Stuart	South Dakota	Sept 22 1901
44	Jensen, Henry Norman	Wisconsin	Sept 2 1901
19	Jones, Needham Lee	Mississippi	Sept 2 1901
61	Kantz, Austin	Washington	May 19 1901
40	Keenan, Ernest Clinton	New York	Sept 2 1901
9	Kempff, Clarence Selby	California	May 20 1901
50	Landis, Irwin Franklin	Kansas	Sept 2 1901
46	Leahy, William Daniel	Wisconsin	May 20 1901
24	McCarthy, Albert Henry	Iowa	Sept 2 1901
31	McDowell, Willis	Pennsylvania	May 19 1901
47	Magill, Samuel George, jr.	North Dakota	May 19 1901
415	Mahony, Daniel Sullivan	Michigan	Sept 2 1901
12	Miller, Cyrus Robinson	California	Sept 2 1901
55	Morse, John Wise	Massachusetts	Sept 2 1901
18	Murfin, Orin Gould	Ohio	Sept 2 1901
14	Overstreet, Luther Martin	Nebraska	Sept 2 1901
40	Owen, Alfred Crosby	District of Columbia	Sept 2 1901
22	Owens, Charles Truesdale	Pennsylvania	Sept 2 1901
54	Perrill, Maria Page	Indiana	Sept 2 1901
53	Powell, Joseph Wright	New York	May 19 1901
39	Pratt Peter Lloyd	Illinois	May 19 1901
5	Prosser, Alfred Warren	Nebraska	May 19 1901
31	Reynolds, William Herbert	Georgia	Sept 2 1901
	Richardson, Louis Clark	South Carolina	Sept 2 1901
	Reble, Clifton Charles	Maryland	Sept 2 1901

Class—56 members—Annual Examination, June, 1896.

Age at date of admission.		Order of merit in—												Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engine, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	History.	Efficiency.	Conduct.			
19	6	41	55	43	53	49	40	53	29	46	37	9	13	43	
18	0	39	52	45	39	45	46	45	10	31	37	42	98	45	
16	11	55	46	55	50	53	54	14	49	18	48	28	62	5	
16	8	4	19	22	45	13	26	25	10	20	28	49	141	38	
15	11	39	49	50	31	54	53	39	45	49	53	47	127	5	
19	11	15	26	29	19	18	15	9	9	26	37	21	43	31	
16	9	21	9	10	17	5	11	35	35	41	8	43	101	11	
17	8	49	54	54	56	45	55	3	41	26	51	54	202	5	
16	11	1	1	5	34	2	2	2	26	1	1	1	4	23	
19	1	46	29	29	26	28	21	48	20	53	43	45	114	33	
17	3	5	2	1	16	1	1	3	1	3	14	5	12	21	
17	8	6	22	20	53	28	20	27	30	35	24	55	213	39	
18	1	31	47	44	6	45	47	55	25	51	17	2	11	36	
18	0	26	33	33	30	51	22	20	14	2	21	30	64	27	
19	0	36	18	22	33	22	33	54	39	31	24	13	32	25	
15	11	12	14	7	19	23	9	35	23	7	37	17	39	13	
16	5	27	33	48	51	40	27	25	40	24	34	27	56	37	
15	11	2	8	9	26	7	4	7	28	4	8	32	65	6	
19	2	37	9	38	13	27	35	34	17	12	28	26	53	36	
17	9	50	51	49	24	30	44	42	35	53	8	35	81	44	
17	2	24	43	29	38	45	40	1	6	33	7	23	49	29	
17	7	35	44	41	17	43	40	39	32	39	21	10	22	34	
18	9	21	21	14	22	30	16	3	30	16	17	13	32	19	
19	8	37	42	47	37	36	45	24	42	35	24	22	45	40	
17	8	52	39	52	49	50	48	46	55	48	54	23	71	49	
18	11	30	50	51	35	55	51	43	44	49	44	28	61	2	
18	2	53	30	32	52	42	39	48	51	55	48	45	132	50	
18	0	24	27	25	21	33	30	22	48	51	50	44	103	35	
17	8	8	31	42	5	33	33	48	19	33	2	5	12	24	
18	3	11	25	40	42	35	27	37	51	45	24	19	41	31	
17	9	48	31	26	41	37	27	47	21	47	47	53	196	47	
19	8	23	12	11	43	11	13	19	49	19	46	39	57	15	
18	11	28	17	16	35	9	3	8	13	14	28	50	147	12	
18	3	31	53	37	14	52	52	12	47	30	17	23	49	2	
17	4	19	36	16	10	20	19	23	15	13	17	2	11	18	
19	10	9	36	19	11	24	13	29	3	22	4	16	23	16	
18	0	51	47	46	43	37	43	39	18	39	24	42	183	46	
15	3	44	16	25	40	20	25	20	53	22	51	40	39	22	
18	9	7	3	7	22	3	5	15	35	8	12	20	64	24	
16	13	3	4	3	6	4	6	16	8	6	2	8	18	23	
18	5	34	40	34	8	37	37	31	23	15	28	46	128	39	
19	11	29	7	12	4	6	7	13	16	42	23	33	71	8	
19	4	14	9	14	1	17	24	21	10	17	5	41	94	20	
18	10	23	40	21	12	16	22	51	34	42	42	2	11	2	
16	0	18	29	2	28	19	22	28	5	29	16	19	42		

Relative standing of the Naval Cadets of the Second Class—

Order of annual merit.	Name.	State from which appointed	Date of admission.
17	Sargent, Leonard Rundlett.....	Minnesota.....	Sept. 6, 1902
28	Sexton, Walton Roswell.....	Illinois.....	May 19, 1902
10	Sheffield, Fletcher Lamar.....	Georgia.....	Sept. 6, 1902
41	Smith, Arthur St. Clair, jr.....	Iowa.....	Sept. 6, 1902
1	Terry, Joseph Dandridge.....	Virginia.....	May 19, 1902
7	Theleen, David Elias.....	Wisconsin.....	Sept. 6, 1902
16	Van Orden, George.....	Michigan.....	May 19, 1902
12	Webber, George.....	Arkansas.....	Sept. 6, 1902
9	White, William Russell.....	Arizona.....	Sept. 6, 1902
30	Williams, Hilary.....	Indiana.....	Sept. 6, 1902
5	Yarnall, Harry Ervin.....	Iowa.....	Sept. 6, 1902

56 members—Annual Examination, June, 1896—Continued.

Age at date of admission.		Order of merit in—											Number of demerits.	Order of annual merit.
Years.	Months.	Seamanship.	Astronomy.	Steam machinery, marine engines, and boilers.	Summer practical work in steam engineering.	Calculus and mechanics.	Physics and chemistry.	French.	Mechanical drawing.	History.	Efficiency.	Conduct.		
17	1	15	6	27	55	15	12	6	53	5	44	11	25	17
16	8	17	23	32	47	20	31	31	27	24	34	36	81	28
17	6	13	14	16	28	12	18	18	21	10	8	5	12	e10
19	8	44	33	34	31	40	50	51	46	37	28	18	40	41
19	3				15								a r	
17	10	19	13	6	2	14	9	31	4	28	14	12	31	7
15	1	54	27	24	47	25	38	45	42	44	55	51	174	e46
16	4	41	38	38	45	44	48	29	32	11	28	35	76	e42
17	3	41	23	13	3	7	16	11	2	20	37	25	52	9
18	3	46	44	28	9	26	35	17	38	40	6	36	82	30
17	10	10	4	4	24	10	7	10	7	9	12	13	32	*5

Relative standing of the Naval Cadets of the Third

Order of annual merit.	Name.	State from which appointed.	Date of admission.
21	Abele, Clarence Arthur	Massachusetts	Sept. 6, 1894
40	Applewhite, Scott Carter	Indiana	May 19, 1894
5	Arnold, William Wood	New Jersey	May 19, 1894
42	Balcock, John Franklin	New York	Sept. 12, 1894
13	Boone, Charles	Ohio	Sept. 6, 1894
9	Briggs, Wilbur Gerheart	New York	Sept. 6, 1894
10	Briggs, Zeno Everett	Nebraska	Sept. 12, 1894
4	Brockway, Benjamin Little	South Carolina	Sept. 6, 1894
18	Brown, Josephus Jarvis	Illinois	Sept. 6, 1894
34	Brown, Morris Hamilton	Indiana	May 19, 1894
26	Constien, Edward Theodore	Pennsylvania	May 19, 1894
19	Cotten, Lyman Atkinson	North Carolina	Sept. 6, 1894
25	Cronan, William Pigott	Connecticut	Sept. 6, 1894
20	Dinger, Henry Charles	Wisconsin	May 19, 1894
6	Elson, Herman Jacob	Mississippi	May 19, 1894
36	Evans, Franck Taylor	At large	Sept. 6, 1894
22	Faller, Guy William	Wisconsin	May 19, 1894
31	Farrin, Thomas Benjamin, jr	Illinois	Sept. 12, 1894
4	Gilmer, James Blair	Virginia	May 19, 1894
4	Graham, John Simon	Colorado	May 19, 1894
61	Halligan, John, jr	Massachusetts	Sept. 6, 1894
7	Hand, James Alexander, jr	South Dakota	Sept. 6, 1894
4	Hanrahan, David Carlisle	Wisconsin	May 19, 1894
5	Hord, Oliver Saunders	Kentucky	May 19, 1894
5	Hunter, Charles Milton	Ohio	May 19, 1894
41	Huntington, Arthur Franklin	New York	Sept. 12, 1894
30	Johnson, Thomas Lee	Kansas	May 19, 1894
68	Kram, James Chatham	Pennsylvania	Sept. 6, 1894
5	Lehfeldt, Henry August	Wisconsin	May 19, 1894
27	Love, James Monroe, jr	Virginia	Sept. 6, 1894
11	McIntyre, Edward William	California	Sept. 6, 1894
24	Mary, Ulysses Samuel	Missouri	Sept. 6, 1894
13	Madison, Zachariah Harvey	Illinois	Sept. 6, 1894
15	Mannix, Daniel Pratt	Ohio	Sept. 6, 1894
15	Marble, Ralph Norris, jr	Minnesota	May 19, 1894
16	Mitchell, Alexander Neely	Ohio	Sept. 6, 1894
26	Nelson, Charles Preston	Massachusetts	May 19, 1894
5	Peterson, Romeo Lloyd	Michigan	June 1, 1894
23	Pottengill, George Tilford	Idaho, at large	Sept. 12, 1894
12	Pinney, Frank Lucius	Connecticut	Sept. 6, 1894
29	Roper, Walter Gordon	Georgia	Sept. 12, 1894
27	Schofield, John Anderson	Missouri	Sept. 6, 1894
17	Shane, Louis	Nebraska	Sept. 6, 1894

Class—55 members—Annual Examination, June, 1896.

Age at date of admission.		Order of merit in—							Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French and Spanish.	Mechanical drawing.	Efficiency.	Conduct.		
17	10	16	17	28	28	30	30	7	57	21
18	4	40	46	46	29	49	47	45	170	40
17	7	53	51	42	43	35	14	25	91	§
18	0	37	39	51	52	50	34	51	206	42
17	11	5	22	22	11	26	14	4	48	13
18	7	8	5	11	15	25	19	2	33	9
17	11	13	19	17	26	4	13	5	51	10
18	9	51	42	47	49	37	47	25	22	†
16	7	11	22	12	9	39	42	14	68	18
17	6	45	37	28	18	39	5	36	114	34
18	6	26	23	43	36	28	39	1	30	26
19	8	23	12	12	34	13	21	10	61	19
15	7	39	31	21	14	15	19	31	106	25
18	2	9	12	20	20	30	29	33	109	20
18	4	15	11	10	8	4	2	7	57	6
18	11	43	43	43	12	45	34	34	110	36
16	1	18	34	38	34	14	38	10	61	22
17	7	47	48	31	23	27	52	21	86	M
18	2	38	53	30	49	37	31	31	107	†
19	1	47	39	23	43	47	26	30	104	†
18	3	3	2	2	2	16	7	9	58	*1
18	11	11	8	2	5	17	12	21	87	7
18	9	21	50	53	51	39	26	37	120	†
18	3	54	54	50	55	46	44	43	161	§
19	8	44	52	52	54	55	54	54	231	§
17	6	45	39	40	38	52	46	46	173	41
19	1	34	25	25	37	21	29	39	136	30
17	3	42	44	49	45	51	52	52	211	43
18	5	55	55	35	24	44	42	49	198	§
19	6	33	24	33	26	29	18	16	74	27
17	6	7	9	4	17	32	7	20	85	11
17	8	21	10	24	29	11	26	49	194	24
17	8	35	38	55	46	7	44	39	135	33
16	0	40	49	15	20	53	39	18	76	35
15	2	9	20	27	38	8	14	13	66	15
18	11	18	27	25	22	1	21	29	100	16
17	3	35	47	48	40	18	7	44	108	38
17	10	50	12	16	16	19	1	42	150	§
16	10	24	21	6	7	24	25	55	243	23
19	9	17	16	36	25	2	11	17	75	12
18	11	26	44	54	52	33	31	53	219	39
18	6	32	29	45	41	48	50	23	88	37
17	4	18	13	19	3	20	54	41	139	17

Relative standing of the Naval Cadets of the Third Class—

Order of annual merit.	Name.	State from which appointed	Date of admission.
• 3	Smith, George Leonard	New Hampshire	Sept. 6 1904
29	Sweet, George Cook	New York	Sept. 22 1904
31	Tardy, Walter Benjamin	Arkansas	May 19 1904
14	Tarrant, William Theodore	Texas	Sept. 6 1904
5	Taylor, Hugh Kirkpatrick	Ohio	Sept. 22 1904
•	Thorpe, George Cyrus	Minnesota	May 19 1904
5	Watts, William Carleton	Pennsylvania	Sept. 22 1904
32	Wells, William Benefiel	Iowa	May 19 1904
• 4	Williams, Henry	Maryland	Sept. 6 1904
28	Williams, Yancey Sullivan	South Carolina	Sept. 6 1904
8	Woods, Edward	Massachusetts	May 19 1904
• 2	Wright, Henry Tutwiler	Alabama	Sept. 6 1904

55 members—Annual Examination, June, 1896—Continued.

Age at date of admission.		Order of merit in—							Number of demerits.	Order of annual merit.
Years.	Months.	Trigonometry, analytical geometry, and descriptive geometry.	Physics and chemistry.	English and law.	French and Spanish.	Mechanical drawing.	Efficiency.	Conduct.		
18	0	2	3	14	12	3	6	19	78	*3
17	3	29	29	33	32	12	34	48	176	29
18	11	29	18	7	46	54	14	35	111	31
16	1	25	22	8	6	21	23	5	52	14
19	7	52	35	32	41	42	31	23	86	§
19	4	40	35	36	48	35	47	38	133	n
15	8	4	4	5	4	10	10	47	175	5
17	4	29	28	39	32	42	50	28	94	32
17	0	1	1	17	19	6	23	15	72	*4
18	4	28	32	40	29	34	34	10	61	28
18	6	14	7	9	9	9	4	25	91	8
19	8	5	6	1	1	23	3	3	38	*2

Relative standing of the Naval Cadets of the Fourth

Order of annual merit.	Name.	State from which appointed	Date of admission
15	Bailey, John Eliot.....	Michigan.....	May 20, 1902
29	Beckner, John Taliaferro.....	Kentucky.....	May 20, 1902
18	Bissell, Henry Harrison.....	New York.....	May 20, 1902
* 22	Bisset, Guy Aleysias.....	Kentucky.....	Sept. 6, 1902
17	Bloch, Claude Charles.....	Kentucky.....	Sept. 6, 1902
9	Bowers, John Treadwell.....	New Jersey.....	Sept. 6, 1902
56	Branch, Frank Oak.....	Indiana.....	Sept. 6, 1902
42	Brinser, Harry Lerch.....	Pennsylvania.....	Sept. 6, 1902
* 23	Buchanan, Allen.....	Indiana.....	Sept. 6, 1902
51	Buttrick, James Tyler.....	Rhode Island.....	Sept. 6, 1902
24	Case, William Stanhope.....	Illinois.....	Sept. 6, 1902
13	Clement, James Wilkinson Legare, jr.....	South Carolina.....	Sept. 22, 1902
24	Cole, Cyrus Willard.....	Ohio.....	Sept. 6, 1902
54	Combs, James Rockwell.....	Illinois.....	Sept. 6, 1902
20	Courtney, Charles Edward.....	New York.....	May 20, 1902
25	Dungan, Paul Baxter.....	Nebraska.....	Sept. 6, 1902
†	Evans, Herbert Heard.....	Mississippi.....	Sept. 6, 1902
* 24	Fenner, Edward Blaine.....	New York.....	May 20, 1902
53	Fischer, Charles Hermann.....	Pennsylvania.....	Sept. 6, 1902
50	Forman, Charles William.....	Illinois.....	Sept. 6, 1902
44	Frawley, William John.....	Massachusetts.....	May 20, 1902
* 26	Gleason, Henry Miller.....	Kansas.....	May 20, 1902
41	Greenalade, John Wills.....	Ohio.....	May 20, 1902
55	Hatch, Charles Byron, jr.....	Illinois.....	Sept. 6, 1902
†	Heim, Frank Pinckney, jr.....	Kentucky.....	May 20, 1902
28	Horne, Frederick Joseph.....	New York.....	May 20, 1902
47	Hunt, Walter Merrill.....	Maine.....	Sept. 6, 1902
* 25	Jeffers, William Nicholas.....	New York.....	Sept. 27, 1902
27	Johnson, Alfred Wilkinson.....	At large.....	May 20, 1902
34	Kalbfus, Edward Clifford.....	At large.....	May 20, 1902
†	Kimberly, Victor Ashfield.....	Massachusetts.....	Sept. 6, 1902
23	Lackey, Henry Ellis.....	At large.....	May 20, 1902
26	Larimer, Edgar Brown.....	Kansas.....	Sept. 6, 1902
27	Lewis, John Earl.....	Minnesota.....	Sept. 6, 1902
43	McCarty, Sterling Hicks.....	Missouri.....	Sept. 6, 1902
22	Major, Samuel Ira Monger.....	Kentucky.....	Sept. 6, 1902
45	Mathews, James Edward.....	Illinois.....	May 20, 1902
16	Miller, William Nichol.....	Texas.....	Sept. 20, 1902
30	Morgan, Charles Elmer.....	West Virginia.....	Sept. 6, 1902
25	Morrison, Farmer.....	Arkansas.....	Sept. 6, 1902
†	Muir, John Church.....	California.....	Sept. 6, 1902
†	Northup, Arthur Weed.....	Ohio.....	Sept. 6, 1902
29	Pope, Ralph Elton.....	Nebraska.....	May 20, 1902
11	Royall, Hilary Herbert.....	Alabama.....	May 20, 1902

Class—65 members—Annual Examination, June, 1896.

Age at date of admission.		Order of merit in—					Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French and Spanish.	Efficiency.	Conduct.		
17	10	8	13	31	29	48	105	15
16	8	3	37	44	36	60	164	29
19	3	50	15	2	5	57	137	18
18	1	1	2	3	36	17	51	*2
17	2	17	23	17	61	26	60	17
18	5	7	41	8	7	22	56	9
17	4	38	60	60	60	59	152	56
18	9	30	40	47	31	49	106	42
18	9	4	4	9	1	10	42	*3
19	11	57	47	48	14	25	61	51
13	1	(a)	(a)	(a)	(a)			a 1
17	1	49	8	10	56	2	17	13
19	3	19	32	25	36	13	46	21
19	1	54	45	52	62	54	123	54
17	11	36	7	24	6	45	89	20
18	2	23	16	29	11	42	87	25
15	5	59	28	46	50	31	68	†
18	9	9	3	7	14	22	56	*4
19	11	44	59	58	31	6	33	53
18	11	26	49	55	62	54	123	50
18	9	52	54	30	31	47	94	44
18	7	11	6	6	2	17	50	*6
15	4	32	38	54	31	17	51	41
17	1	42	48	55	56	63	214	55
18	2	61	54	58	26	62	203	†
15	3	35	28	16	51	35	81	26
18	11	50	51	43	41	11	45	47
18	6	10	9	1	3	53	118	*5
18	6	46	42	23	23	38	82	38
17	6	27	25	30	13	46	92	34
17	10	6	26	11	7	35	80	8
18	11	40	43	5	36	21	54	23
19	1	46	22	42	20	6	32	36
17	2	14	35	55	36	14	48	37
19	8	56	34	40	51	34	78	43
18	0	42	10	20	41	30	64	22
19	4	33	60	31	41	33	76	45
18	9	19	12	12	47	58	149	16
18	7	27	35	25	48	8	37	30
19	7	38	28	36	36	25	60	35
16	5	59	62	62	51	56	124	†
17	1	58	57	50	19	51	116	†
19	4	48	38	52	14	38	82	49
18	9	5	27	22	11	42	87	11

Relative standing of the Naval Cadets of the Fourth Class—

Order of annual merit.	Name.	State from which appointed	Date of admission.
14	Sadler, Everit Jay	Kansas	Sept. 20, 1897
19	Sayles, William Randall	Rhode Island	May 20, 1897
22	Shackford, Chauncey	New Jersey	Sept. 6, 1897
46	Shapley, Lloyd Stowell	Missouri	May 20, 1897
†	Smith, Clyde Wilbur	Iowa	Sept. 6, 1897
51	Sparrow, Herbert George	Ohio	Sept. 6, 1897
23	Tausig, Joseph Kneller	At large	May 20, 1897
47	Thomas, Samuel Brown	At large	May 20, 1897
31	Tomb, James Harvey	Missouri	Sept. 6, 1897
24	Turner, Robert Francis	Iowa	Sept. 6, 1897
21	Vincent, Roe Willis	Pennsylvania	Sept. 6, 1897
40	Watson, Adolphus Eugene	At large	May 20, 1897
7	Weichert, Ernest Augustus	Connecticut	Sept. 6, 1897
30	West, Arthur Stuart	Georgia	May 20, 1897
12	White, Richard Drace	Missouri	May 20, 1897
5	Wood, Robert Thompson	New York	May 20, 1897
10	Wood, Welborn Cicero	Georgia	Sept. 6, 1897
27	Woodward, Clark Howell	Georgia	Sept. 6, 1897
6	Wright, Luke Edward	Tennessee	May 20, 1897
25	Wyman, Henry Lake	Illinois	Sept. 6, 1897
20	Yates, Fred Hammond	Maine	May 20, 1897

65 members—Annual Examination, June, 1896—Continued.

Age at date of admission.		Order of merit in—					Number of demerits.	Order of annual merit.
Years.	Months.	Algebra and geometry.	English and history.	French and Spanish.	Efficiency.	Conduct.		
16	4	16	19	14	51	40	84	14
17	5	23	11	40	14	1	10	19
18	5	45	54	61	19	3	20	52
19	6	29	52	49	45	29	63	46
16	10	54	68	62	51	50	108	*
18	1	2	1	3	19	4	23	*1
17	9	26	22	39	4	25	60	33
17	4	33	50	51	19	24	59	47
19	0	18	28	34	7	42	87	31
19	8	(a)	(a)	(a)	(a)	-----	-----	a a 7
18	4	21	17	27	48	35	80	21
16	9	40	52	33	41	14	49	40
17	11	15	5	13	10	20	53	7
16	2	30	45	37	23	40	85	39
18	1	12	14	18	31	32	74	12
16	0	62	57	44	56	53	120	5
19	8	21	17	15	23	4	22	10
18	6	36	21	28	26	9	39	27
17	11	63	44	36	14	61	171	5
16	9	52	20	18	45	14	49	23
16	4	13	33	38	56	11	44	28

APPOINTMENTS, RESIGNATIONS, DISMISSALS, DEATHS.

OCTOBER 3, 1895, TO OCTOBER 3, 1896.

Appointed Ensigns July 1, 1896.

Naval Cadet Gillis, Irvin Van Gorder.....	Class of ..
Naval Cadet McLean, Ridley.....	Class of ..
Naval Cadet Stone, Raymond.....	Class of ..
Naval Cadet Sellers, David Foote.....	Class of ..
Naval Cadet Webster, Charles.....	Class of ..
Naval Cadet Tompkins, John Thomas.....	Class of ..
Naval Cadet Babin, Provost.....	Class of ..
Naval Cadet Fullinwider, Simon Peter.....	Class of ..
Naval Cadet Jones, Lewis Burton.....	Class of ..
Naval Cadet Graham, Stephen Victor.....	Class of ..
Naval Cadet Bennett, Ernest Linwood.....	Class of ..
Naval Cadet Sandoz, Fritz Louis.....	Class of ..
Naval Cadet Luby, John McClane.....	Class of ..
Naval Cadet Scott, William Pitt.....	Class of ..
Naval Cadet Kavanagh, Arthur Glynn.....	Class of ..
Naval Cadet Snow, Carlton Farwell.....	Class of ..
Naval Cadet Bookwalter, Charles Sumner.....	Class of ..
Naval Cadet Bulmer, Roscoe Carlyle.....	Class of ..
Naval Cadet Galbraith, Gilbert Smith.....	Class of ..
Naval Cadet Spear, Roscoe.....	Class of ..
Naval Cadet McNeely, Robert Whitehead.....	Class of ..
Naval Cadet Turpin, Walter Stevens.....	Class of ..
Naval Cadet Stone, George Loring Porter.....	Class of ..
Naval Cadet Whitted, William Scott.....	Class of ..
Naval Cadet Osborn, Robert Hatfield.....	Class of ..
Naval Cadet Manion, Walter James.....	Class of ..
Naval Cadet Gelm, George Earl.....	Class of ..
Naval Cadet England, Clarence.....	Class of ..

Appointed Assistant Engineers July 1, 1896.

Naval Cadet Hudgins, John Milton.....	Class of ..
Naval Cadet McMorris, Boling Kavanaugh.....	Class of ..
Naval Cadet Hinds, Alfred Walton.....	Class of ..
Naval Cadet Moody, Roscoe Charles.....	Class of ..
Naval Cadet James, Leland Frierson.....	Class of ..
Naval Cadet Chappell, Ralph Hubert.....	Class of ..
Naval Cadet Reeves, Joseph Mason.....	Class of ..
Naval Cadet Cooper, Ignatius Taylor.....	Class of ..

APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS. 53

Naval Cadet Baker, Henry Thomas.....	Class of 1894
Naval Cadet Lyon, Frank.....	Class of 1894
Naval Cadet Cone, Hutch Ingham.....	Class of 1894
Naval Cadet Winship, Emory.....	Class of 1894
Naval Cadet De Lany, Edwin Hayden.....	Class of 1894

Appointed Assistant Naval Constructors July 1, 1896.

Naval Cadet Robert, William Pierre.....	Class of 1894
Naval Cadet Cox, Daniel Hargate.....	Class of 1894
Naval Cadet Roberts, Thomas Gaines.....	Class of 1894
Naval Cadet Adams, Lawrence Stowell.....	Class of 1894

Appointed Second Lieutenant United States Marine Corps July 1, 1896.

Naval Cadet Shaw, Melville Jones.....	Class of 1894
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Resigned.

Naval Cadet Churchill, Winston, class appointed 1890 (omitted from previous register).....	Sept. 11, 1894
Naval Cadet Rutledge, Carl C., third class.....	Oct. 29, 1895
Naval Cadet Brown, George, jr., third class.....	Nov. 20, 1895
Naval Cadet Horn, Frank J., fourth class.....	Dec. 18, 1895
Naval Cadet Wells, Daniel H., jr., fourth class.....	Jan. 6, 1896
Naval Cadet Vernou, Walter N., fourth class.....	Jan. 22, 1896
Naval Cadet Bird, Owen S., fourth class.....	Jan. 24, 1896
Naval Cadet Parrish, John W. C., fourth class.....	Jan. 31, 1896
Naval Cadet Bowman, Everett N., fourth class.....	Feb. 8, 1896
Naval Cadet Conger, William H., fourth class.....	Feb. 8, 1896
Naval Cadet Hilleary, John F., second class.....	Feb. 10, 1896
Naval Cadet Naylor, Charles J., second class.....	Feb. 10, 1896
Naval Cadet England, William H., third class.....	Feb. 10, 1896
Naval Cadet Cashman, Frank P., fourth class.....	Feb. 10, 1896
Naval Cadet Cocke, Herbert C., fourth class.....	Feb. 10, 1896
Naval Cadet Craighead, Walter B., fourth class.....	Feb. 10, 1896
Naval Cadet Cresap, Edward O., fourth class.....	Feb. 10, 1896
Naval Cadet Cull, Julius E., fourth class.....	Feb. 10, 1896
Naval Cadet Doyle, Stafford H. R., fourth class.....	Feb. 10, 1896
Naval Cadet Ferguson, Garland S., fourth class.....	Feb. 10, 1896
Naval Cadet Gillett, Ransom H., fourth class.....	Feb. 10, 1896
Naval Cadet Irwin, Algernon C., fourth class.....	Feb. 10, 1896
Naval Cadet Kearny, Philip, fourth class.....	Feb. 10, 1896
Naval Cadet Maguire, Charles L., fourth class.....	Feb. 10, 1896
Naval Cadet Morris, Thomas J., fourth class.....	Feb. 10, 1896
Naval Cadet Savidge, Albert C., fourth class.....	Feb. 10, 1896
Naval Cadet Schmidt, Oscar, fourth class.....	Feb. 10, 1896
Naval Cadet Asserson, Frederick A., fourth class.....	Feb. 24, 1896
Naval Cadet Montgomery, Russell, fourth class.....	May 1, 1896
Naval Cadet Hord, Oliver S., third class.....	June 7, 1896
Naval Cadet Wood, Robert T., fourth class.....	June 7, 1896
Naval Cadet Kimball, Henry S., first class.....	June 8, 1896
Naval Cadet Bagby, Robert C., second class.....	June 8, 1896
Naval Cadet Bryant, Samuel W., second class.....	June 8, 1896
Naval Cadet Lehfeldt, Henry A., third class.....	June 8, 1896
Naval Cadet Muir, John C., fourth class.....	June 8, 1896
Naval Cadet Wright, Luke E., fourth class.....	June 8, 1896

54 APPOINTMENTS, DISCHARGES, RESIGNATIONS, DISMISSALS.

Naval Cadet Day, John A., second class	June 10, 1906
Naval Cadet Arnold, William W., third class	June 10, 1906
Naval Cadet Hunter, Charles Milton, third class	June 11, 1906
Naval Cadet Taylor, Hugh K., third class	June 11, 1906
Naval Cadet Terry, Joseph D., second class	July 29, 1906
Naval Cadet Farrin, Thomas B., jr., second class	Sept. 30, 1906

Dismissed.

Naval Cadet Osterhout, Frank M., fourth class	Dec. 14, 1905
Naval Cadet Weessels, Arthur L., second class	Apr. 8, 1906
Naval Cadet Kearny, Philip, fourth class	Aug. 28, 1906
Naval Cadet Roberts, Charles V., fourth class	Sept. 30, 1906

Deaths.

Naval Cadet Purse, Henry A., third class	Apr. 9, 1905
Naval Cadet Roehle, Clifton C., first class	July 14, 1906

Dropped.

Naval Cadet Peterson, Roscoe L., second class	Sept. 2, 1906
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MERIT ROLLS FOR 1895-'96.

Merit rolls, made out annually for each class, show the proficiency of the cadets in each branch of study. The numbers given in the table, page 99, showing the relative weight of the different branches, are used as coefficients; the final mark in each branch (on a scale of 4) being multiplied by the number assigned to that branch. The sum of the products, after adding the multiple for discipline, is the final mark of the cadet for the year.

In the case of cadets that take an advanced course in any branch, the final mark in that branch is determined by adding to the final mark received in the required course one-fifth of the amount by which the final mark in the advanced course exceeds 2.50.

In the graduating merit roll, the final standing for the course is determined by the sum of the yearly marks.

"Cadets who attain 85 per cent of the multiple in any year shall be distinguished by a star affixed to their names on the merit rolls." (Regulations United States Naval Academy, par. 191.)

The diplomas of cadets whose final marks on the graduating merit roll are not less than 85 per cent of the maximum read, "passed with distinction;" those whose final marks are between 74 per cent and 85 per cent of the maximum read, "passed with credit;" and those whose final marks are between 62½ per cent and 74 per cent of the maximum read, "passed."

P Physically disqualified for the naval service.

R Resigned after successfully completing the four years' course.

* Received 85 per cent of the multiple.

† Found deficient, allowed a reëxamination, passed, and continued with class.

‡ Found deficient, allowed a reëxamination, again deficient, and recommended to be dropped.

§ Found deficient, and recommended to be dropped.

¶ Retained in next lower class.

a Absent from examination.

d Dismissed.

e Selected for Engineer Division.

m Deficient; recommended for reëxamination; resigned.

n Deficient; recommended for reëxamination; sick and absent.

s Sick.

w Found deficient, warned.

Merit roll of the Graduating Class of Naval Cadets—Line Division—25 members—at the conclusion of the Six Years' Course, June, 1896.

Rank.	Name.	Final aggregate.										Assignment.
		Naval construction.	Ordnance and gunnery.	Navigation and surveying.	Steam machinery and boilers.	International law.	French, Spanish and (German.	(Value reports.	Navigation note book, journals, and station bills.	Aggregate for final examination.	Aggregate for four years.	
1	Maxima.	24	44	44	30	24	24	16	8	240	760	1,000
1	Irvin Van G. Ellis	48.02	38.83	34.50	10.25	14.18	21.70	16.00	6.06	204.24	670.65	874.00 Ensign.
2	Ridley McLean	47.74	37.74	30.70	10.85	19.08	21.49	15.30	7.74	217.24	640.40	847.04 Ensign.
3	Raymond Stone	49.14	38.06	32.45	15.40	10.08	27.24	15.30	7.28	203.79	640.00	844.48 Ensign.
4	David F. Sellers	47.74	38.17	31.01	10.75	14.24	22.06	15.06	4.80	193.25	646.85	842.10 Ensign.
5	Charles Webster	46.20	36.85	34.52	14.10	10.38	25.77	15.04	6.06	202.48	639.01	842.08 Ensign.
6	John T. Tompkins	45.08	37.40	33.25	14.85	15.08	19.46	15.00	4.00	181.10	640.41	821.51 Ensign.
7	Frederick Balen	45.04	39.40	34.84	16.00	12.12	19.88	14.22	6.34	171.94	635.90	797.84 Ensign.
8	Simon P. Fullinwider	40.22	37.14	33.44	14.05	16.02	21.77	15.22	7.06	191.08	604.40	795.55 Ensign.
9	L. Burton Jones	46.50	34.87	31.08	14.00	16.08	21.86	14.24	6.00	185.02	607.50	782.82 Ensign.
10	Stephen V. Graham	42.56	33.06	34.10	15.40	14.24	22.00	14.40	6.06	184.23	593.06	761.59 Ensign.
11	Ernest L. Bennett	45.02	28.24	34.40	16.25	14.08	23.17	15.36	6.40	183.82	590.54	774.26 Ensign.
12	Fritz L. Harding	40.74	28.74	37.25	15.05	19.08	26.08	13.60	6.04	161.89	584.55	761.14 Ensign.
13	John McCall	43.40	28.12	35.20	13.05	17.40	24.20	15.22	4.50	176.90	585.01	762.01 Ensign.
14	William P. Frost	45.04	23.06	35.02	14.75	17.00	21.79	14.08	7.24	183.84	570.42	754.26 Ensign.
15	Arthur C. Kavanagh	43.06	20.40	30.15	16.05	15.18	23.00	14.04	7.00	181.81	571.70	753.55 Ensign.
16	Carlton P. Shaw	46.44	21.90	25.65	13.00	14.34	21.84	14.22	7.16	177.71	570.14	747.09 Ensign.
17	Charles H. Beckwith	44.06	24.22	28.19	14.30	14.24	21.07	14.22	5.34	174.53	570.57	745.10 Ensign.
18	Melville J. Shaw	37.94	20.40	24.21	11.00	16.02	23.49	13.40	6.14	164.39	577.55	741.61 Second Lieutenant, U. S. M. C.
19	Monroe C. Palmer	43.54	20.53	24.71	14.75	15.34	21.02	14.77	7.28	160.09	560.00	741.08 Ensign.
20	Albert C. Hallenbach	42.16	20.59	25.19	12.30	7.44	20.64	15.77	5.34	154.86	561.48	740.02 Ensign.

(Order of merit.)

21	Roscoe Spear	38.02	20.61	20.48	15.75	17.52	21.21	13.04	7.35	172.00	504.18	717.17	Ensign.
22	Robert W. McNeely	43.83	34.05	26.84	10.55	11.36	19.07	13.04	0.20	172.00	502.61	715.30	Ensign.
23	Walter M. Turpin	41.80	34.10	30.00	10.25	11.04	19.80	13.12	5.00	173.15	501.30	714.51	Ensign.
24	George L. P. Stone	40.04	31.06	22.99	14.00	17.40	19.80	14.40	7.14	108.09	537.08	725.00	Ensign.
25	William M. Whitford	40.46	33.00	23.15	10.15	5.70	17.04	14.80	7.04	104.24	503.75	725.00	Ensign.
26	Robert H. Chaborn	34.72	26.00	22.22	12.55	10.80	10.89	13.92	0.40	169.16	503.00	721.10	Ensign.
27	Walter J. Manton	38.56	27.00	21.07	14.15	15.12	21.26	12.40	5.00	162.30	501.00	710.80	Ensign.
28	George E. Gelm	37.53	27.72	21.54	17.80	10.14	21.30	10.92	0.14	160.80	551.01	712.44	Ensign.
29	Clarence England	30.03	20.07	24.50	15.30	13.06	21.07	10.84	0.14	160.75	520.10	712.01	Ensign.

Note. Naval Cadets William P. Robert, Daniel H. Cox, Thomas G. Roberts, and Lawrence M. Adams, pursuing special studies abroad, did not appear at the final graduating examination.

Merit roll of the Graduating Class of Naval Cadets—Engineer Division—13 members—at the conclusion of the Six Years' Course, June, 1896.

Name	Naval construction.					Marine engines.	Designing machine.	Boilers.	French, Spanish, and German.	(Value reports.		Journals and station bills.	Aggregate for final examination.	Aggregate for four years.	Final aggregate.	Assignment.
	22	21	20	19	18					16	15					
Maxima	22	21	20	19	18	16	15	14	13	12	11	10	9	8	7	6
1 John M. Hudgins	24.16	56.52	32.04	26.50	20.09	15.12	14.12	190.55	687.90	815.45	Assistant Engineer.					
2 Belling K. McMorris	24.06	56.52	31.99	26.40	21.14	14.00	13.32	190.93	691.26	782.19	Assistant Engineer.					
3 Alfred W. Hinde	26.64	51.30	31.96	26.30	20.23	14.80	15.00	187.13	594.14	775.27	Assistant Engineer.					
4 Roscoe C. Mosely	20.60	54.07	23.04	23.30	19.25	14.46	15.46	180.35	594.02	768.37	Assistant Engineer.					
5 Leland F. James	22.60	53.26	29.52	26.90	20.09	15.40	14.40	185.19	574.71	763.90	Assistant Engineer.					
6 Ralph H. Chappell	26.00	55.34	22.05	20.00	19.20	15.04	13.46	182.20	579.26	761.56	Assistant Engineer.					
7 Joseph M. Reeves	26.40	56.46	27.54	31.70	21.26	13.76	14.78	194.30	561.93	758.23	Assistant Engineer.					
8 Ignatius T. Coe	23.04	47.70	26.04	25.00	19.35	15.60	9.68	167.71	680.65	748.36	Assistant Engineer.					
9 Henry T. Baker	20.96	49.50	26.19	27.00	19.53	14.16	10.44	167.74	579.85	747.68	Assistant Engineer.					
10 Frank Lyon	23.92	55.80	26.26	27.90	19.86	14.12	14.80	182.70	583.14	745.84	Assistant Engineer.					
11 Hutch I. Coe	25.12	53.26	27.16	30.60	17.90	15.00	12.44	183.21	589.21	742.43	Assistant Engineer.					
12 Emory Winship	27.44	55.80	26.01	29.10	20.72	14.44	11.12	184.67	533.41	728.08	Assistant Engineer.					
13 Edwin H. De Lany	27.26	48.76	26.66	28.10	17.92	14.96	13.04	186.93	511.57	690.40	Assistant Engineer.					

Meet roll for the four years ending June, 1896, of the Naval Cadets of the class appointed in 1891, now performing required service afloat—Line Personnel—members.

Order of annual meeting for four years	Name	Aggregate for				
		First Year	Second Year	Third Year	Fourth Year	Total Aggregate for four years
1	Walter F. Smith	71.40	130.00	130.00	130.00	361.40
2	William G. Greenback	70.44	130.75	130.00	130.00	361.19
3	Frank H. Remmy	66.70	130.12	130.00	130.00	356.82
4	Frank P. Baldwin	66.71	127.75	130.00	130.00	354.46
5	William C. Davidson	66.20	125.44	130.00	130.00	351.64
6	Harvey Lawrence	62.20	119.24	130.00	130.00	341.44
7	Philip M. Pearson	62.00	122.01	130.00	130.00	344.01
8	Arthur C. Chester	57.50	120.07	130.00	130.00	337.57
9	John H. McLaughlin	62.00	115.00	125.00	130.00	332.00
10	Henry V. Butler, Jr.	56.72	116.03	125.00	130.00	327.75
11	James E. Walker	56.52	118.72	125.00	130.00	330.24
12	William H. Chambers	55.13	110.00	125.00	130.00	320.13
13	David W. Todd	60.70	117.25	120.00	125.00	322.95
14	James J. Batty	55.32	119.17	125.00	130.00	329.49
15	William H. Hambley	56.50	114.07	120.00	130.00	320.57
16	Walter R. (Harvard)	64.17	117.54	122.00	125.00	328.71
17	John V. Kieckhefer	55.46	115.34	120.00	125.00	315.80
18	Edmund M. Bennett	60.00	113.11	120.00	125.00	318.11
19	Michael J. McCormack	60.75	112.00	120.00	125.00	317.75
20	Worth Bagley	60.72	122.77	120.00	125.00	330.49
21	Albion J. Washburn	54.75	111.75	120.00	125.00	311.50
22	Samuel B. Barrow	50.00	112.40	120.00	125.00	307.40
23	Edward H. Watson	60.75	113.40	120.00	125.00	319.15
24	Joseph C. Breckinridge	60.75	117.50	120.00	125.00	323.25
25	Orin S. Knapp	50.32	111.00	120.00	125.00	306.32
26	Rowt H. Hall	57.01	100.20	120.00	125.00	302.21
27	Rufus Z. Johnston, Jr.	53.10	107.00	120.00	125.00	295.10

Note.—Cadet Stuart F. Smith pursuing special course of study afloat.

Merit roll for the four years ending June, 1895, of the Naval Cadets of the class appointed in 1891, now performing required service afloat—Engineer Division—12 members.

Order of general merit for four years.	Name.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	(General) aggregate for four years.	
	Maxima	76	152	228	304	760	
1	Thomas M. Dick	65.50	129.25	195.75	262.00	692.50	J
2	Charles K. Mallory	55.21	115.78	184.15	249.71	605.95	B
3	Newton Mansfield	59.42	122.75	179.54	246.16	611.17	C
4	Daniel M. Garrison	53.93	113.69	177.65	249.56	594.83	D
5	Franklin D. Karna	56.23	116.95	178.57	243.7	595.45	E
6	James P. Morton	62.08	121.95	185.61	239.35	598.99	F
7	Frederick K. Freeman	53.73	107.77	166.14	243.23	570.87	G
8	Charles H. Walker	54.47	109.65	167.08	238.60	571.80	H
9	John F. Marshall, jr	56.98	112.48	156.96	232.71	558.13	I
10	Darwin R. Merritt	52.07	108.77	157.55	234.32	552.71	J
11	Edward H. Dunn	56.90	108.85	157.89	216.54	530.18	K
12	Ernest F. Eckhardt	53.55	104.34	161.11	239.65	558.65	L

Merit roll for the four years ending June, 1896, of the Naval Cadets of the class appointed in 1892, now performing required service afloat—Line Division—26 members.

Order of general merit for four years.	Name.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima	76	152	228	304	760
*1	Richard H. Robinson	71.06	138.03	203.13	272.81	685.03
2	Jonas H. Holden	62.89	126.95	190.83	255.32	635.99
3	Thomas T. Craven	66.07	125.74	187.30	255.82	634.93
4	Charles L. Poor	69.53	127.13	184.82	247.82	629.30
5	Ralph Earle	67.57	126.36	181.32	253.49	628.74
6	Andrew E. Kalbach	60.46	121.18	183.22	249.69	614.55
7	Ralph E. Walker	59.03	126.25	186.93	240.04	612.25
8	Daniel W. Wurtsbaugh	60.66	115.51	180.13	247.10	603.40
9	Ivan C. Wettengel	59.42	118.11	176.25	244.38	598.16
10	Charles M. Tozer	62.70	116.04	178.39	240.03	597.16
11	Wat T. Cluverius, jr.	62.65	120.72	170.28	239.86	593.51
R 12	Henry S. Kimball	61.79	118.14	173.54	236.75	590.22
13	Duncan M. Wood	60.85	113.07	176.85	240.54	591.31
14	Leigh C. Palmer	66.26	119.79	168.54	233.39	587.98
15	Thomas A. Kearney	61.24	114.25	172.62	234.22	582.33
16	Arthur MacArthur, jr.	61.90	114.48	167.83	235.25	579.46
17	Frank E. Ridgely	62.82	115.77	167.96	231.73	578.28
18	Dudley W. Knox	57.49	114.04	167.47	236.06	577.06
19	Charles E. Gilpin	62.98	120.44	165.73	231.76	570.91
20	Mark St. C. Ellis	59.36	114.85	169.79	233.13	566.93
21	Edward McCauley, jr.	60.59	112.33	163.17	228.32	564.41
22	Karl P. Jessop	57.29	110.55	165.79	224.93	558.56
23	John H. Roys	54.28	110.71	156.53	225.72	547.24
24	Henry C. Mustin	53.52	110.94	161.19	217.66	543.31
25	Roland I. Curtin	54.18	108.06	158.02	218.08	538.34
26	Amon Bronson, jr.	56.23	100.26	152.16	209.55	518.20

R Resigned after successfully completing the four years' course.

Merit roll for the four years ending June, 1896, of the Naval Cadets of the class appointed in 1892, now performing required service afloat—Engineer Division—12 members.

Order of general merit for four years.	Name.	Aggregate for first year.	Aggregate for second year.	Aggregate for third year.	Aggregate for fourth year.	General aggregate for four years.
	Maxima.....	76	152	228	304	760
*1	Charles L. Lelper.....	68.15	128.00	190.40	289.00	675.55
2	Gatewood S. Lincoln.....	65.84	123.21	182.88	251.25	622.98
3	Edward T. Fitzgerald.....	59.45	117.60	176.36	252.74	605.15
4	Henry O. Binnet.....	65.30	125.67	177.08	255.98	624.03
5	Albert W. Marshall.....	55.84	112.84	169.76	244.87	583.31
6	Charles P. Burt.....	55.57	109.67	168.98	242.38	576.60
7	Kenneth G. Castleman.....	55.88	109.79	168.28	234.67	568.62
8	William L. Littlefield.....	54.55	107.98	161.80	232.04	556.37
9	Pope Washington.....	60.79	108.31	159.21	215.96	544.27
10	George B. Rice.....	58.31	109.04	153.34	230.82	551.51
11	James B. Henry, Jr.....	61.27	103.80	156.24	212.95	534.26
12	Arthur Crenshaw.....	54.25	103.62	157.06	217.65	532.58

MERIT ROLL—FIRST CLASS.

Order of annual merit.	Name.	Seamanship, naval construction, and naval tactics.	Seamanship, practice cruise.	Ordnance and gunnery.	Navigation and surveying.	Navigation, practice cruise.	Least squares and applied mechanics.	Physics.	International law.	Physiology and hygiene.	Efficiency.	Conduct.	Aggregate.
	Maxima.....	52	8	60	48	8	50	20	16	8	55	55	504
1	Richard H. Robinson.....	45.37	6.76	53.70	42.98	7.68	16.05	17.55	14.20	6.14	29.04	31.36	272.81
2	Thomas T. Craven.....	43.94	6.56	49.50	37.68	7.02	16.10	15.90	12.20	5.84	29.36	30.72	265.88
3	Jonas H. Holden.....	44.96	6.86	48.90	37.62	7.36	15.10	15.80	12.48	6.08	28.08	30.86	265.22
4	Ralph Earle.....	43.42	6.40	49.50	39.48	7.42	14.40	14.65	14.16	6.30	28.56	31.20	263.49
5	Andrew E. Kalbach.....	42.64	6.34	46.95	38.16	7.40	15.80	16.30	11.80	6.78	27.44	30.06	249.69
6	Charles L. Poor.....	42.25	6.34	47.40	37.56	7.40	14.40	16.15	12.84	6.04	27.60	29.84	247.68
7	Daniel W. Wurtbaugh.....	39.65	6.90	46.09	38.16	7.66	15.15	14.70	12.68	5.64	27.62	30.64	247.10
8	Ivan C. Wettengel.....	43.16	6.64	46.75	38.26	6.88	13.95	14.45	14.82	6.70	28.00	27.20	244.88
9	Duncan M. Wood.....	41.21	5.92	50.10	36.12	6.88	14.10	15.10	11.06	5.90	25.05	26.80	240.54
10	Ralph E. Walker.....	41.84	6.12	42.90	38.04	6.90	15.55	16.65	12.44	6.02	25.20	28.88	240.04
11	Charles M. Tozer.....	40.95	6.30	45.45	38.64	6.52	16.30	14.55	12.12	6.86	25.64	28.80	240.08
12	Wat T. Cluvertius, jr.....	41.60	6.14	43.05	35.64	7.12	14.05	15.65	13.68	6.12	28.88	30.08	239.88
B13	Henry S. Kimball.....	40.58	6.36	43.65	38.04	6.74	13.50	14.40	11.60	5.50	28.24	30.16	238.75
14	Dudley W. Knox.....	41.21	5.94	46.20	36.16	7.50	12.95	14.20	11.92	5.32	27.68	30.00	238.08
15	Arthur MacArthur, jr.....	39.91	6.30	48.30	34.08	7.26	12.95	14.55	11.72	6.10	25.60	28.48	235.25
16	Thomas A. Kearney.....	39.65	6.90	41.25	33.48	7.16	14.10	14.10	12.72	6.06	28.24	30.56	234.28
17	Leigh C. Palmer.....	39.26	6.28	42.90	33.24	7.76	13.90	13.10	12.60	5.70	28.48	27.04	233.89
18	Frank E. Ridgely.....	39.13	6.18	40.95	33.12	7.26	13.60	14.45	12.86	6.28	28.72	29.68	231.73
19	Edward McCanley, jr.....	37.05	6.50	42.90	34.20	7.34	13.55	12.60	11.44	5.22	28.24	29.28	228.32
20	John H. Roys.....	36.66	5.96	43.35	33.48	7.28	12.65	14.80	12.56	5.70	27.36	26.92	226.72
21	Earl P. Jessop.....	39.29	5.96	41.40	32.52	7.24	11.65	13.55	12.12	5.34	26.88	28.88	224.93

Order of annual merit.	Name.	Merrit Roll—First Class.											
		Naval construction.	Designing machinery.	Marine engines.	Boilers.	Experimental engineering.	Gunner practical work in steam engineering.	Least squares and applied mechanics.	Physics.	Physiology and hygiene.	Efficiency.	Conduct.	Aggregate.
	Maxima	82	48	48	82	90	90	90	90	8	82	82	804
1	Charles L. Leiper	27.60	42.12	35.70	28.24	17.85	17.65	16.95	17.60	5.73	28.88	20.72	200.09
2	Edward T. Fitzgerald	28.64	38.76	33.60	35.60	16.60	17.70	14.65	14.55	6.14	28.88	20.72	203.84
3	Gatewood S. Lincoln	25.44	37.62	33.90	33.40	16.40	17.50	16.05	15.90	5.60	28.40	27.64	201.35
4	Albert W. Marshall	24.72	36.24	31.60	24.56	17.60	18.00	13.60	15.15	6.04	28.80	28.56	244.87
5	Charles P. Burt	24.08	33.64	31.00	25.20	16.95	17.30	13.75	16.05	6.00	28.40	24.96	242.88
6	Kenneth G. Castleman	25.44	35.04	29.80	22.40	16.20	17.90	12.95	14.50	5.42	28.72	26.00	234.47
7	William L. Littlefield	23.68	33.72	29.30	22.56	15.55	17.80	13.00	14.95	5.26	28.16	28.96	233.04
8	George B. Rice	22.80	31.80	28.60	22.24	15.80	17.25	13.05	14.00	5.13	27.68	27.92	228.53
9	Henry O. Bisset	24.40	32.16	30.10	21.63	14.50	16.30	14.15	14.70	5.62	26.04	27.44	225.93
10	Arthur Crenshaw	21.68	30.72	27.80	21.92	14.50	16.55	12.95	12.60	5.40	27.60	26.24	217.45
11	Pope Washington	21.92	28.16	27.20	21.76	14.80	16.30	12.65	13.85	5.76	27.28	22.80	215.95
12	James B. Henry, Jr.	22.08	31.32	27.50	21.12	14.10	16.55	12.50	12.50	5.20	26.48	23.60	212.95

Merit roll of the Naval Cadets of the Second Class—66 members—Annual Examination, June, 1896.

Name.	Rank.										Aggregate.
	1	2	3	4	5	6	7	8	9	10	
Maxima ..	10.32	10.77	10.68	10.30	10.08	10.65	10.65	8.91	8.40	9.81	295
1 Ernest F. Egbert	11.10	29.39	9.34	45.28	37.00	7.04	11.49	7.30	17.00	27.37	209.50
2 William G. De Boer	11.16	27.44	6.00	43.60	28.10	7.26	9.54	7.44	17.63	27.79	202.97
3 Joseph W. Powell	10.59	25.05	6.66	41.88	23.30	6.48	10.66	7.02	17.75	27.09	199.69
4 Marion P. Percell	10.30	27.13	6.23	43.45	23.70	6.50	9.00	6.88	17.05	24.64	194.56
5 Harry E. Yarnall	10.59	27.23	6.30	39.28	28.50	6.69	10.77	6.86	17.05	26.22	194.27
6 Arthur J. Hepburn	10.39	26.66	6.19	39.84	24.10	6.76	9.45	7.13	17.10	24.57	192.94
7 David E. Theelen	10.65	27.23	7.14	38.60	23.50	5.88	11.01	5.96	17.00	26.39	189.14
8 Alfred W. Presney	8.91	25.84	7.10	40.08	23.90	6.63	10.28	5.56	16.75	24.29	188.75
9 William R. White	8.40	25.76	7.12	39.84	31.00	6.69	11.43	6.26	16.50	23.27	187.54
10 Fletcher B. Sheffield	9.69	25.04	6.14	37.56	31.00	6.44	9.72	6.23	17.10	27.27	186.69
11 Henry L. Collins	9.23	26.58	6.32	40.69	22.00	5.88	9.00	5.60	17.10	22.66	185.17
12 Cyrus R. Miller	8.91	25.04	5.94	39.72	24.40	6.74	10.44	6.43	16.65	20.20	184.26
13 Thomas C. Hart	9.78	27.12	6.26	39.72	23.50	5.88	9.69	6.92	16.50	23.97	184.17
14 Clifton C. Rooble	9.29	26.72	6.14	34.88	29.90	6.04	10.65	5.96	16.95	23.69	182.93
15 Daniel S. Mahoney	9.80	26.40	5.69	39.24	31.50	6.43	7.74	6.30	16.30	22.45	182.02
16 Luther M. Overstreet	10.05	24.98	6.26	32.28	31.30	6.63	11.04	6.20	17.20	26.25	181.41
17 Leonard R. Sargent	9.41	23.22	4.69	38.88	31.60	6.50	7.66	7.08	16.40	26.67	180.68
18 Orin G. Martin	9.25	25.04	6.60	35.95	29.60	6.18	10.88	6.48	16.90	27.44	180.65
19 Needham L. Jones	9.25	25.60	6.23	32.76	31.00	7.04	9.24	6.26	16.80	26.29	180.19
20 William H. Reynolds	9.60	25.63	7.23	35.04	26.70	6.26	10.50	6.34	17.35	23.10	179.69
21 Gilbert Chase	9.41	23.27	6.26	34.88	31.10	6.70	10.88	6.08	16.80	23.76	179.41
22 Louis C. Richardson	8.47	24.42	6.74	26.69	27.20	6.26	9.06	5.56	16.45	27.44	175.29
23 David P. Lloyd, Jr	9.41	24.41	6.26	35.77	29.20	6.18	10.80	6.26	16.45	27.44	174.49

(Order of annual merit.)

24	Albert H. McCarthy.....	10.17	8.70	22.08	6.92	32.04	27.40	5.00	9.03	5.88	17.75	27.37	174.51
25	Andrew T. Graham.....	8.58	9.05	24.00	6.02	33.84	27.40	5.50	8.98	5.88	16.70	23.32	172.78
26	Frederic R. Holman.....	8.55	10.02	22.40	6.45	33.00	27.30	5.90	10.14	0.52	16.65	25.20	172.16
27	Joseph W. Graeme.....	8.97	9.70	22.04	6.08	30.12	28.90	6.40	10.35	7.34	16.55	24.64	171.45
28	Walton E. Sexton.....	9.45	9.20	23.12	5.54	33.98	27.70	5.92	9.45	6.18	16.85	23.73	170.95
29	Victor S. Houston.....	9.27	8.37	23.20	5.90	30.48	28.60	7.78	10.83	5.86	17.15	26.41	170.85
30	Hilary Williams.....	8.28	8.34	23.44	6.72	33.12	27.30	6.45	8.91	5.62	17.20	23.73	169.12
31	Willis McDowell.....	9.09	9.21	22.24	5.72	32.16	28.10	5.85	7.71	5.90	16.70	23.53	169.02
32	Charles T. Owens.....	8.34	9.72	23.60	5.80	32.70	28.40	5.94	7.68	6.20	15.95	23.38	167.77
33	Oscar D. Duncan.....	8.28	8.91	23.20	6.18	32.88	29.10	5.60	9.87	5.24	16.45	22.05	167.76
34	Henry N. Jensen.....	8.61	8.34	22.16	6.32	30.72	28.60	5.80	9.09	5.64	16.85	23.58	167.01
35	William D. Leahy.....	9.27	9.00	23.68	6.26	32.64	28.00	5.22	7.80	5.26	16.15	22.51	166.89
36	William P. Giles.....	8.79	8.22	21.68	6.86	30.48	28.90	5.44	9.00	5.23	16.90	27.44	166.57
37	Robert W. Henderson.....	8.76	8.76	21.20	5.23	30.90	28.10	6.08	8.79	6.18	16.55	24.90	165.83
38	Peter L. Pratt.....	8.64	8.46	22.64	6.74	31.44	27.20	5.92	9.60	6.28	16.65	21.42	165.18
39	Walter M. Falconer.....	10.23	9.39	24.80	5.00	32.88	29.80	6.05	9.24	5.80	16.70	14.91	164.81
40	Austin Kautz.....	8.55	8.43	21.28	5.92	31.68	28.20	6.10	8.49	5.80	16.70	25.62	164.77
41	Arthur St. C. Smith, Jr.....	8.34	8.76	22.64	6.06	30.90	28.50	5.58	8.04	5.78	16.65	25.90	164.21
42	George Webber.....	8.40	8.61	22.40	5.58	30.90	28.70	5.98	9.09	6.73	16.65	24.01	163.80
43	Sheldon W. Anding.....	8.40	7.56	21.76	5.00	30.36	28.60	5.56	9.30	5.48	16.50	27.02	163.54
44	Edward T. Hoopes.....	8.13	8.01	21.12	6.20	32.76	28.40	5.78	9.00	5.24	17.10	23.73	163.47
45	William C. Aserson.....	8.43	7.89	21.52	5.98	30.48	28.10	5.72	10.50	5.88	16.50	22.99	161.79
46	George Van Orden.....	7.77	9.00	22.84	5.54	33.24	27.00	5.74	8.49	5.52	15.50	18.90	160.54
47	Samuel G. Magill, Jr.....	8.19	8.79	22.56	5.78	31.44	28.10	5.62	9.72	5.46	16.25	17.64	159.55
48	Alfred C. Owen.....	8.10	8.22	21.36	5.68	31.44	28.50	5.80	10.05	5.72	15.65	18.41	157.93
49	Ernest C. Keenan.....	8.04	8.52	20.16	5.46	30.24	28.70	5.68	7.53	5.86	16.55	24.29	156.68
50	Irwin P. Landis.....	8.01	8.85	20.16	5.26	30.64	28.70	5.80	7.71	5.23	16.20	21.07	155.02
+	John W. Morse.....	8.79	7.65	22.48	6.42	29.40	28.00	6.64	7.95	5.94	16.90	25.41	152.61
+	Clarence S. Kempff.....	8.62	8.04	20.40	5.96	28.32	26.10	5.74	8.10	5.80	16.40	24.78	156.98
+	Robert C. Bagby.....	7.62	8.28	19.60	5.38	29.04	24.60	6.58	7.74	6.22	16.20	24.73	156.14
+	Samuel W. Bryant.....	8.48	8.13	20.64	6.06	28.92	24.80	5.80	8.07	5.20	16.70	21.95	153.20
+	John A. Day.....	8.16	7.59	19.68	4.54	30.48	23.30	7.04	8.58	6.08	15.95	17.43	148.83
ar	Joseph D. Terry.....	(a)	(a)	(a)	6.40	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)

ar Resigned.

Merit roll of the Naval Cadets of the Third Class—55 members—Annual Examination, June, 1896.

Order of annual merit.	Name.	Trigonometry, analytical and descriptive geometry.	Physics and chemistry.	English and law.	French and Spanish.	Mechanical drawing.	Efficiency.	Conduct.	Average.
Maxima.....		40	16	30	30	24	12	30	120
*1	John Halligan, jr.	33.80	14.40	17.90	19.10	19.00	10.05	14.35	120.65
*2	Henry T. Wright	32.80	12.90	18.45	20.00	18.75	10.35	14.05	119.75
*3	George L. Smith	34.80	13.05	16.00	15.70	20.34	10.05	17.05	120.30
*4	Henry Williams	35.30	15.00	15.20	15.00	21.84	9.75	17.05	121.55
5	William C. Watts	33.40	13.25	17.50	18.70	20.70	10.00	14.75	120.61
6	Herman J. Elson	31.30	12.65	16.65	18.05	22.25	10.25	14.30	119.70
7	James A. Hand, jr.	31.60	12.84	17.90	17.50	19.80	9.95	17.65	121.00
8	Edward Woods	31.80	12.85	16.75	15.90	20.05	10.30	17.35	120.70
9	Wilbur G. Briggs	32.00	13.12	16.10	15.45	18.65	9.84	19.00	120.77
10	Zeno E. Briggs	31.40	12.05	15.20	14.05	22.25	9.95	18.45	120.65
11	Edward W. McIntyre	29.50	12.75	17.00	15.35	17.55	10.05	17.45	120.30
12	Frank L. Pinney	29.60	12.45	14.20	14.15	20.45	9.90	17.75	121.15
13	Charles Boone	32.60	11.05	14.80	15.65	18.54	9.90	18.55	121.15
14	William T. Tarrant	27.70	11.80	16.80	17.35	19.05	9.75	18.65	120.00
15	Ralph N. Marble, jr.	31.70	12.00	14.55	13.70	20.05	9.90	18.00	120.75
16	Alexander N. Mitchell	29.30	11.25	14.65	14.75	20.25	9.81	17.00	120.61
17	Louis Shane	29.30	12.60	15.10	19.00	19.14	9.12	18.05	120.11
18	Josephus J. Brown	31.60	11.80	16.05	15.90	17.15	9.54	17.95	120.00
19	Lyman A. Cotten	29.00	12.60	16.05	13.65	20.15	9.81	18.15	119.65
20	Henry C. Dinger	31.70	12.80	15.00	14.95	17.25	9.69	18.75	120.14
21	Clarence A. Abele	29.70	12.35	14.50	14.00	17.65	9.57	18.20	120.25
22	Guy W. Faller	29.20	10.75	14.05	12.85	20.04	9.60	18.15	119.77
23	George T. Pettengill	27.80	11.95	17.00	16.65	18.75	9.75	15.70	119.50
24	Ulysses S. Macy	28.50	12.75	14.70	13.95	20.64	9.75	14.20	119.63
25	William P. Cronan	25.90	11.12	14.95	15.50	19.90	9.64	18.60	119.60
26	Edward T. Constien	27.60	11.25	12.75	12.80	18.15	9.57	19.10	120.20
27	James M. Love, jr.	26.50	11.75	14.20	14.05	18.15	9.67	17.60	120.70
28	Yancy S. Williams	27.10	11.05	12.95	12.95	17.40	9.68	18.15	119.20
29	George C. Sweet	27.00	11.20	14.20	12.80	20.24	9.68	16.70	119.70
30	Thomas L. Johnson	28.20	11.05	14.65	12.75	19.05	9.69	18.95	119.00
31	Walter B. Tardy	27.00	12.20	16.90	12.25	15.05	9.90	16.65	120.10
32	William B. Wells	27.00	11.64	14.00	12.90	18.95	9.28	17.20	120.00
33	Zachariah H. Madison	24.10	10.60	12.75	12.25	21.20	9.45	18.95	120.65
34	Morris H. Brown	25.00	10.64	14.50	15.05	17.16	10.14	18.00	120.00
35	Daniel P. Mannix	25.70	10.04	15.55	14.95	15.24	9.57	17.70	120.75
36	Charles P. Nelson	26.10	10.12	12.40	12.65	19.69	10.05	16.95	120.05
37	John A. Schofield	26.90	11.20	13.65	12.55	15.95	9.28	17.35	120.04
38	Frank T. Evans	25.20	10.44	13.75	15.70	16.20	9.68	16.70	120.02
39	Walter G. Boyer	27.60	10.25	12.80	12.85	17.45	9.65	12.65	120.10
40	Scott C. Applewhite	25.70	10.25	12.60	12.95	15.90	9.28	14.00	120.75
41	Arthur F. Huntington	25.00	10.55	12.95	12.70	15.45	9.22	14.60	120.00
42	John F. Babcock	26.00	10.50	12.10	12.65	15.75	9.68	12.90	120.75
43	James C. Kress	25.60	10.25	12.25	12.30	15.75	9.27	12.65	120.25
44	Roarke L. Peterson	24.20	12.60	15.25	15.40	19.25	10.41	15.00	122.02
45	Thomas B. Farrin, jr.	24.80	10.05	14.40	14.60	18.25	9.27	17.60	120.00

Merit roll of the Naval Cadets of the Third Class—55 members—Annual Examination, June, 1896—Continued.

Order of annual merit.	Name.	Trigonometry, analytical and descriptive geometry.	Physics and chemistry.	English and law.	French and Spanish.	Mechanical drawing.	Efficiency.	Conduct.	Aggregate.
	Maxima.....	40	16	20	20	24	12	20	152
†	David C. Hanrahan	28.50	9.92	12.90	12.90	17.16	9.72	16.40	107.50
†	James B. Gilmer	25.90	9.52	14.45	12.95	17.28	9.66	16.80	106.56
§	Hugh K. Taylor	23.90	10.68	14.35	13.55	16.86	9.66	17.35	106.35
†	John S. Graham	24.80	10.56	14.75	13.35	16.02	9.72	16.90	106.10
π	George C. Thorpe	24.80	10.68	14.20	13.00	17.34	9.39	16.00	105.21
§	William W. Arnold	23.60	9.76	13.80	13.35	17.34	9.90	17.25	105.00
†	Benjamin L. Brockway	24.10	10.48	13.45	12.95	17.28	9.39	17.25	104.90
§	Henry A. Lehfeldt	22.80	9.12	14.25	14.25	16.68	9.54	14.20	100.84
§	Oliver S. Hord	23.20	9.28	13.15	12.10	16.38	9.48	15.15	98.74
§	Charles M. Hunter	25.10	9.56	13.00	12.75	15.00	9.12	13.05	97.56

Merit roll of the Naval Cadets of the Fourth Class—65 members—Annual Examination, June, 1896.

Order of annual merit.	Name.	Algebra and geometry.		English and history.		French and Spanish.		Efficiency.		Conduct.		Aggregate.
		80	80	80	80	80	80	80	80	80	80	
	Maxima	80	80	80	80	80	80	80	80	80	80	
*1	Herbert G. Sparrow	18.05	18.40	18.25	2.28	11.57	0	0	0	0	0	0
*2	Gay A. Bisset	18.00	18.30	18.25	2.26	11.59	0	0	0	0	0	0
*3	Allen Buchanan	17.80	17.60	17.45	2.51	11.55	0	0	0	0	0	0
*4	Edward B. Fenner	16.25	18.05	17.00	2.59	11.54	0	0	0	0	0	0
*5	William N. Jeffers	16.00	16.85	19.70	2.44	10.59	0	0	0	0	0	0
*6	Henry M. Gleason	15.85	17.25	17.85	2.45	11.15	0	0	0	0	0	0
7	Ernest A. Weichert	15.40	17.45	17.15	2.25	11.10	0	0	0	0	0	0
8	Viktor A. Kimberly	17.00	15.40	17.30	2.33	10.28	0	0	0	0	0	0
9	John T. Bowers	16.95	14.80	17.55	2.23	11.14	0	0	0	0	0	0
10	Welborn C. Wood	14.95	16.15	16.70	2.27	11.07	0	0	0	0	0	0
11	Hilary H. Royall	17.50	15.25	16.00	2.31	10.71	0	0	0	0	0	0
12	Richard D. White	15.60	16.75	16.15	2.34	10.46	0	0	0	0	0	0
13	James W. L. Clement	13.05	16.90	17.25	2.16	11.74	0	0	0	0	0	0
14	Everitt J. Sadler	15.85	15.90	16.75	2.17	10.74	0	0	0	0	0	0
15	John E. Bailey	16.75	16.40	15.00	2.25	10.44	0	0	0	0	0	0
16	William S. Miller	15.00	16.45	17.30	2.30	9.75	0	0	0	0	0	0
17	Claude C. Bloch	15.30	15.60	16.25	2.13	11.10	0	0	0	0	0	0
18	Henry H. Bissell	12.90	16.30	16.75	2.20	9.92	0	0	0	0	0	0
19	William R. Sayles	14.90	16.50	14.30	2.29	11.45	0	0	0	0	0	0
20	Charles E. Courtney	13.95	17.00	15.55	2.34	10.48	0	0	0	0	0	0
21	Roe W. Vincent	14.95	16.15	15.40	2.19	10.48	0	0	0	0	0	0
22	Samuel I. M. Major	13.80	16.05	16.05	2.22	11.24	0	0	0	0	0	0
23	Henry E. Lackey	13.70	14.40	17.90	2.28	11.19	0	0	0	0	0	0
24	Cyrus W. Cole	15.00	15.20	15.30	2.23	11.31	0	0	0	0	0	0
25	Paul B. Dungan	14.80	16.30	15.10	2.21	10.71	0	0	0	0	0	0
26	Frederick J. Horne, jr.	14.00	15.30	16.50	2.17	10.45	0	0	0	0	0	0
27	Clark H. Woodward, jr.	13.95	15.75	15.30	2.26	11.43	0	0	0	0	0	0
28	Fred H. Yates	15.50	15.05	14.00	2.16	11.34	0	0	0	0	0	0
29	John T. Beckner	17.95	14.70	14.10	2.23	9.74	0	0	0	0	0	0
30	Charles E. Morgan	14.50	14.80	15.80	2.19	11.09	0	0	0	0	0	0
31	James H. Tomb	13.25	15.30	16.85	2.33	10.71	0	0	0	0	0	0
32	Henry L. Wyman	12.85	13.85	16.15	2.21	11.79	0	0	0	0	0	0
33	Joseph K. Tausig	14.70	15.00	14.55	2.34	11.10	0	0	0	0	0	0
34	Edward C. Kalbfus	14.50	15.50	15.05	2.30	10.02	0	0	0	0	0	0
35	Farmer Morrison	13.45	15.80	16.70	2.25	11.10	0	0	0	0	0	0
36	Edgar B. Larimer	13.30	15.00	14.45	2.23	11.52	0	0	0	0	0	0
37	John E. Lewis	15.45	14.80	13.30	2.23	11.59	0	0	0	0	0	0
38	Alfred W. Johnson	13.30	14.45	15.70	2.27	10.77	0	0	0	0	0	0
39	Arthur S. West	14.15	14.30	14.65	2.27	10.74	0	0	0	0	0	0
40	Adolphus E. Watson	13.70	13.45	14.90	2.23	11.59	0	0	0	0	0	0
41	John W. Greenalade	14.10	14.00	13.25	2.24	11.59	0	0	0	0	0	0
42	Harry L. Brinner	14.15	14.55	14.00	2.24	10.41	0	0	0	0	0	0
43	Sterling H. McCarty	12.05	15.00	14.50	2.17	10.03	0	0	0	0	0	0
44	William J. Frawley	12.85	13.15	14.05	2.24	10.39	0	0	0	0	0	0
45	James E. Mathews	14.05	12.55	13.00	2.22	10.48	0	0	0	0	0	0

Merit roll of the Naval Cadets of the Fourth Class—65 members—Annual Examination, June, 1896—Continued.

Order of annual merit.	Name.	Algebra and geometry.	English and history.	French and Spanish.	Efficiency.	Conduct.	Aggregate.
	Maxima.....	20	20	20	4	12	76
46	Lloyd S. Shapley.....	14.25	13.45	13.60	3.21	11.07	55.58
47	Walter M. Hunt.....	12.90	13.70	14.40	3.22	11.84	55.56
48	Samuel B. Thomas.....	14.05	13.75	13.35	3.28	11.13	55.56
49	Ralph E. Pope.....	13.15	14.60	13.30	3.29	10.77	55.11
50	Charles W. Forman.....	14.65	13.90	13.30	3.11	10.17	55.08
51	James T. Buttrick.....	12.50	14.10	13.85	3.29	11.10	54.84
52	Chauncey Shackford.....	13.35	13.15	12.80	3.28	11.70	54.28
53	Charles H. Fischer.....	13.40	12.85	13.10	3.24	11.52	54.11
54	James R. Combs.....	12.80	14.30	13.30	3.11	10.17	53.68
55	Charles B. Hatch.....	13.50	13.95	13.20	3.16	8.79	52.80
56	Frank O. Branch.....	13.85	12.55	12.85	3.14	9.72	52.11
†	Herbert H. Evans.....	12.10	15.30	14.05	3.18	10.98	55.61
§	Luke E. Wright.....	11.30	14.35	14.75	3.29	9.45	53.14
‡	Arthur W. Northup.....	12.25	13.10	13.55	3.28	10.28	52.44
§	Robert T. Wood.....	11.65	13.10	14.10	3.16	10.20	52.21
†	Clyde W. Smith.....	12.80	12.00	12.60	3.17	10.38	50.95
†	Frank P. Helm, jr.....	12.00	13.15	13.10	3.26	8.97	50.43
§	John C. Muir.....	12.10	12.05	12.60	3.17	10.14	50.06
as 1	William S. Case.....						
as 5	Robert F. Turner.....						

REGULATIONS

GOVERNING

THE ADMISSION OF CANDIDATES INTO THE NAVAL ACADEMY AS CADETS.

NOMINATION.

I. The students at the Naval Academy shall be styled *naval cadets*.—(*Rev. Stat.*, § 1512, and act of Congress approved August 5, 1882.)

II. There shall be allowed at said Academy one naval cadet for every Member or Delegate of the House of Representatives, one for the District of Columbia, and ten at large.—(*Rev. Stat.*, § 1513, and act of Congress approved June 17, 1878.) *Provided, however*, That there shall not be at any time more in said Academy appointed at large than ten.—(*Act of Congress approved August 5, 1882.*)

III. The course of naval cadets is six years.—(*Rev. Stat.*, § 1520.) Four years at the Naval Academy and two years at sea, at the expiration of which time the cadet returns to the Academy for final graduation, and the district then becomes vacant.

IV. Appointments to fill all vacancies that may occur during a year in the lower grades of the Line and Engineer Corps of the Navy and of the Marine Corps will be made from the naval cadets, graduates of the year, at the conclusion of their six years' course, in the order of merit as determined by the Academic Board of the Naval Academy. At least fifteen appointments from such graduates will be made each year. Surplus graduates who do not receive such appointments will be given a certificate of graduation, an honorable discharge, and one year's sea pay, as provided for naval cadets.—(*Act of Congress approved August 5, 1882.*)

V. "The Secretary of the Navy shall, as soon after the 5th of March in each year as possible, notify, in writing, each Member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill said vacancy shall be made upon the recommendation of the Member or Delegate, if such recommendation is made by the 1st day of July of that year; but if it is not made by that time the Secretary of the Navy shall fill the vacancy by appointment of an actual resident of the district in which the vacancy exists, who shall have been for at least two years immediately preceding the date of his appointment an actual and bona fide resident of the district in which the vacancy exists and of the legal qualification under the law as now provided. The candidate allowed for the District of Columbia and all the candidates appointed at large shall be selected by the President."—(*Rev. Stat.*, § 1514.)

VI. "Candidates allowed for Congressional districts, for Territories, and for the District of Columbia must be actual residents of the districts or Territories, respectively, from which they are nominated. And all candidates must, at the time of their examination for admission, be between the ages of * fifteen and twenty years and physically sound, well-formed, and of robust constitution."—(*Rev. Stat.*, § 1517.)

VII. Candidates who may be nominated in time to enable them to reach the Academy by the 15th of May will receive permission to present themselves on that date to the Superintendent for examination for admission. Those who may not be nominated in time to present themselves at the May examination will be examined on the first of September following.

When either of the above dates shall fall on Sunday the candidates shall present themselves on the Monday following.

Candidates will be required to enter the Academy immediately after passing the prescribed examination.

No leave of absence will be granted to cadets of the fourth class.

EXAMINATION.

VIII. "All candidates for admission into the Academy shall be examined according to such regulations and at such stated times as the Secretary of the Navy may prescribe. Candidates rejected at such examination shall not have the privilege of another examination for admission to the same class unless recommended by the board of examiners."—(*Rev. Stat.*, § 1515.)

IX. "When any candidate who has been nominated upon the recommendation of a Member or Delegate of the House of Representatives is found, upon examination, to be physically or mentally disqualified for admission, the Member or Delegate shall be notified to recommend another candidate, who shall be examined according to the provisions of the preceding section."—(*Rev. Stat.*, § 1516.)

X. Candidates will be examined physically by a board composed of three medical officers of the Navy at the Naval Academy. Any one of the following conditions will be sufficient to cause the rejection of a candidate, viz:

- Feeble constitution, inherited or acquired;
- Retarded development;
- Impaired general health;
- Decided cachexia, diathesis, or predisposition;
- Any disease, deformity, or result of injury that would impair efficiency, such as—
- Weak or disordered intellect;
- Cutaneous or communicable diseases;
- Unnatural curvature of spine, torticollis, or other deformity;
- Inefficiency of either of the extremities or large articulations from any cause;
- Epilepsy or other convulsions within five years;
- Impaired vision, disease of the organs of vision, imperfect color sense; visual acuteness must not fall below fifteen-twentieths of the normal in either eye;
- Impaired hearing or disease of the ear;
- Chronic nasal catarrh, ozæna, polypi, or great enlargement of the tonsils;
- Impediment of speech to such an extent as to impair efficiency in the performance of duty;
- Disease of heart or lungs or decided indications of liability to cardiac or pulmonary affections;
- Hernia, complete or incomplete, or undescended testis;
- Varicocele, sarcocele, hydrocele, stricture, fistula, hemorrhoids, or varicose veins of lower limbs;
- Disease of the genito-urinary organs;
- Chronic ulcers, ingrowing nails, large bunions, or other deformity of feet;
- Loss of many teeth, or teeth generally unsound.

Attention will also be paid to the stature of the candidate, and no one manifestly under size for his age will be received at the Academy. In the case of doubt about the physical condition of the candidate, any marked deviation from the usual standard of height or weight will add materially to the consideration for rejection. Five feet will be the minimum height for the candidate.

XI. Candidates will be examined mentally by the academic board in reading, writing, spelling, arithmetic, geography, English grammar, United States history, and algebra. Deficiency in any one of these subjects will be sufficient to insure the rejection of the candidate.

GENERAL CHARACTER OF THE MENTAL EXAMINATION.

READING AND WRITING.—Candidates must be able to read understandingly, and with proper accent and emphasis, and to write legibly, neatly, and rapidly.

SPELLING.—They must be able to write from dictation paragraphs from standard pieces of English literature, both prose and poetry, sufficient in number to test fully their qualifications in this branch. The spelling throughout the examination will be considered in marking the papers.

ARITHMETIC.—The candidate will be required—

To express in figures any whole, decimal, or mixed number; to write in words any given number; to perform with facility and accuracy the various operations of addition, subtraction, multiplication, and division of whole numbers, whether abstract or concrete, and to use with facility the tables of money, weight, and measures in common use, including English money.

To reduce compound numbers from one denomination to another, and to express them as decimals, or fractions of a higher or lower denomination; to state the number of cubic inches in a gallon, and the relation between the Troy and Avoirdupois pounds, and to reduce differences of time to differences of longitude, and *vice versa*.

To define prime and composite numbers; to give the test of divisibility by 3, 5, 7, 9, 11, 25, and 125; to resolve numbers into their prime factors, and to find the least common multiple and the greatest common divisor of large as well as of small numbers.

To be familiar with all the processes of common and decimal fractions, and to give clearly the reasons for such processes, and be able to use the contracted methods of multiplication and division given in the ordinary text-books on arithmetic.

To define ratio and proportion, and to solve problems in simple and compound proportion.

To solve problems involving the measurement of rectangular surfaces and of solids, to find the square roots and the cube roots of numbers, and to solve simple problems under percentage, interest, and discount.

The candidates are required to possess such a thorough understanding of all the fundamental operations of arithmetic as will enable them to apply the various principles to the solution of any complex problem that can be solved by the methods of arithmetic; in other words, they must possess such a complete knowledge of arithmetic as will enable them to proceed at once to the higher branches of mathematics without further study of arithmetic.

ALGEBRA.—The examination in *algebra* will be elementary in character, and will be limited to questions and problems upon the fundamental rules, factoring, algebraic fractions, and simple equations of one or more unknown quantities.

GRAMMAR.—In *English grammar* candidates must exhibit a familiarity with all the parts of speech and the rules in relation thereto; they must be able to parse any ordinary sentence given to them, and generally must understand those portions of the subject usually taught and comprehended under the heads of orthography, etymology, and syntax.

The questions will usually be arranged in three divisions. The first division will contain questions somewhat like these:

Explain the use of the objective case. What verbs have distinction of voice? Give the possessive plural of *sea*, *valley*, *basis*, *stratum*, *bandit*.

The second division will contain one or more sentences to be parsed, *e. g.*:

"*They were always a strange family; they rarely acted like other people; their hearts were in the right place, but their heads always seemed to be doing anything but what they ought.*" Such a sentence must be parsed *fully*, giving the part of speech, and kind, case, voice, mood, tense, number, person, degree of comparison, etc., as the case may be, of each word, and its relation to the other words: thus—

Strange is a descriptive adjective, positive degree. It qualifies the noun *family*.

Comparative, *stranger*.

Superlative, *strangest*.

Acted, an intransitive verb, regular (or weak) in conjugation, indicative mood, past tense, third person, plural number. Its subject is *they*.

The third division will contain a number of incorrect sentences to be corrected, thus—

1. *Describe the sources from which our knowledge of these events are derived.*
2. *How sweetly their voices sound!* 3. *Try and do as you was told!* 4. *I should have liked to have been there and seen it.* 5. *There's a sweet little cherubim sits up aloft to keep watch for the life of Poor Jack!*

Among these, correct sentences will sometimes be introduced to test more thoroughly the knowledge of the candidate.

Since the school grammars used in different parts of the country vary among themselves in their treatment of certain words, an answer approved by any grammar of good repute will be accepted.

GEOGRAPHY.—Candidates will be required to pass a satisfactory examination, written or oral, or both, in descriptive geography, particularly of our own country. Questions will be given under the following heads: The definitions of latitude and longitude; the zones; the grand divisions of the land and water; the character of coast lines; the direction and position of important mountain chains and the locality of the higher peaks; the position and course of the principal rivers, their tributaries, and the bodies of water into which they flow; the position of important seas, bays, gulfs, and arms of the sea; the position of independent States, their boundaries and capital cities; the position and direction of great peninsulas, and the situation of important and prominent capes, straits, sounds, channels, and the most important canals; great lakes and inland seas; position and political connection of important islands and of colonial possessions; localities of cities of historical, political, or commercial importance, attention being especially called to the rivers and bays of water on which cities are situated; the course of a vessel in making a voyage between well-known ports.

The candidate's knowledge of the geography of the *United States* can not be too full or specific on all the points referred to above. Accurate knowledge will also be required of the position of the country with reference to other States, and with reference to latitude and longitude; of the boundaries and relative position of the States and Territories, of the name and position of their capitals, and of other important cities and towns.

HISTORY.—Candidates should be familiar with as much of the history of the *United States* as is contained in the ordinary school histories.

The examination will be either written or oral, or both; questions of the same general character as the following will be given:

1. Name the earliest European settlements within the present limits of the *United States*, and give their positions. When and by whom were these settlements made?

2. Explain the three forms of government in the colonies; royal, proprietary, and charter. Name the colonies that originally existed within the present limits of *Massachusetts*; of *Connecticut*. When were these colonies united? What did the colony of *Pennsylvania* include? When was it divided?

3. State the leading events of the colonial wars, and give the results of each war.

4. What were the remote and immediate causes of the Revolution? Explain the navigation acts, the stamp act, writs of assistance. Name the principal battles and other leading events in the wars of the United States, giving the names of commanding officers and stating the results of the battles.

5. Give an account of the formation and adoption of the Constitution.

Give the names of the Presidents, in order, and the leading events in each administration.

ADMISSION.

XII. Candidates that pass the physical and mental examinations will receive appointments as naval cadets, and become students at the Academy. Each cadet will be required to sign articles by which he binds himself to serve in the United States Navy eight years (including his time of probation at the Naval Academy) unless sooner discharged. The pay of a naval cadet is \$500 a year, commencing at the date of his admission.

XIII. Cadets will supply themselves, immediately after their admission, with the following articles, viz:

One dress jacket.....	\$19.50	One jackknife.....	\$0.75
One blouse.....	11.75	Six sheets.....	3.45
Two pairs trousers.....	21.00	Hammock clews.....	.50
Three working suits.....	2.85	One pair of bathing trunks.....	.20
One overcoat.....	22.50	Three pairs white thread gloves.....	.54
One rubber coat.....	4.00	Two black silk neckties.....	.46
One rubber hat.....	.60	Two clothes bags.....	.42
Two pairs of regulation leggins.....	1.50	One hammock mattress.....	3.00
Two parade caps.....	5.90	a One requisition book.....	.30
One knit cap.....	.68	a One pass book.....	.30
One mug.....	.18	a Stencil, ink, and brush.....	.48
One soap box.....	.68	a One bottle of indelible ink.....	.18
One laundry book.....	.25	a One wash basin and pitcher.....	.90
One pair of blankets.....	2.50	a One pair of gymnasium slippers.....	1.12
Two pairs of high shoes.....	8.50	* One whisk.....	.15
One pair of overshoes.....	.72	* One coarse comb.....	.21
Eight white shirts.....	4.40	* One cake of soap.....	.10
Twelve linen collars.....	1.50	* One hairbrush.....	.55
Eight pairs of cuffs.....	1.76	* Stationery.....	.50
* Eight pairs of socks.....	2.00	* Twelve white handkerchiefs.....	2.40
* Eight towels.....	2.00	* One pair of suspenders.....	.40
* Shaving outfit.....	1.65	* Four suits pajamas.....	6.00
* Four pairs of drawers (winter).....	5.00	* One toothbrush.....	.20
b Four pairs of drawers (summer).....	3.00	* Thread and needles.....	.19
* Four undershirts (winter).....	5.00	* Blacking brush and blacking.....	.65
b Four undershirts (summer).....	3.00	* Nailbrush.....	.30
One hand glass.....	.36	Six pillow cases.....	1.50
Four woolen shirts.....	7.40	One black silk neckerchief.....	.60
One sweater.....	2.38	Name plate.....	.30
Three white hats.....	1.20	Two white blouses.....	4.00
One reefer.....	9.00		
	152.66		80.55

When moving into cadet quarters, cadets will supply themselves with the following articles, viz:

a Two bedspreads	\$2.20	One mirror	\$1.10
a Two pairs of drill gloves	1.00	a One rug	1.00
a One slop jar .....	.95	a One hair mattress	5.35
a Two spatter cloths .....	.80	a One broom .....	.30
One hair pillow .....	.80		
	<hr/>		<hr/>
	5.75		7.64

Articles marked *a* will not be taken on board the practice ship.

Of the articles marked *b*, cadets entering in September must have four each.

The articles marked *, not being required to conform to a standard pattern, may be brought by the cadet from home, but all other articles must conform to the regulations, and must therefore be supplied by the storekeeper.

Each naval cadet must, on admission, deposit with the pay officer the sum of \$30, for which he will be credited on the books of that officer, to be expended by direction of the Superintendent in the purchase of text-books and other authorized articles besides those enumerated in the preceding article.

All deposits for clothing and the entrance deposit of \$30 must be made before a candidate can be received into the Academy.

SUMMARY OF EXPENSES.

Deposit for clothing, etc	\$126.64
Deposit for books, etc	20.00
	<hr/>
Total amount required	216.64

The value of clothing brought from home is to be deducted from this amount.

Each naval cadet *one month after admission* will be credited with the amount of his actual expenses in traveling from his home to the Academy.

COURSE OF INSTRUCTION.

[Reference books are marked (*).]

FIRST YEAR—FOURTH CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MATHEMATICS	4	4	ALGEBRA: Fundamental operations; reduction and conversion of fractional and surd quantities; reduction and solution of equations of the first and second degrees; inequalities; involution and evolution; arithmetical, geometrical, and harmonical progression.	Hall and Knight's Elementary Algebra. Hall and Knight's Higher Algebra. Todhunter's Algebra.*
	2	4	GEOMETRY: Geometry of the straight line, of the circle, and of the plane; theory of proportion; properties of similar figures.	Chauvenet's Geometry.
ENGLISH	2	4	ENGLISH: The structure and historical development of the English language; syntax; analysis of sentences; punctuation and capitals; exercises in the composition of letters.	Whitney's Essentials of English Grammar. Hart's Punctuation. Buehler's Practical Exercises in English.* Webster's Dictionary.*
	3	4	HISTORY: Outlines of history, especially the history of Greece and Rome, and of the states of western Europe; historical geography; important points in naval history, by notes.	Swinton's Outlines of the World's History. Labberton's Historical Atlas.*
LANGUAGES.....	5	4	FRENCH: "Natural Method"	Chardenal's Complete French Course. Bercy's La Langue Française. Marion's Le Verbe en quatre Tableaux Synoptiques. Termes Nautiques, Pornain. Bellow's Dictionary.

FIRST YEAR—FOURTH CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MATHEMATICS.....	3	4	ALGEBRA: Course for first term continued. Development of algebraic functions by means of indeterminate coefficients and the binomial theorem; permutations and combinations; theory of probability; summation of series; continued fractions; logarithms; exponential equations; theory of equations, including the solution of numerical equations; determinants.	Hall and Knight's Higher Algebra. Bowditch's Useful Tables.
	3	4	GEOMETRY: Course for first term continued. Spherical geometry; the cone and the cylinder; mensuration of rectilinear figures, and of the sphere, cone, and cylinder; application of algebra to determinate geometry.	Chauvenet's Geometry.
ENGLISH	3	4	ENGLISH: Words, sentences, and paragraphs; exercises in the composition of letters and telegrams. Themes.	A. R. Hill's Foundations of Rhetoric. Boehler's Practical Exercises in English. Webster's Dictionary.
	3	4	HISTORY: Progress of colonial development in America, and the history of the United States; important points in the naval history of the United States by notes or lectures.	Eliot's History of the United States. Mitchell's Atlas.
LANGUAGES.....	5	4	FRENCH: "Natural Method." SPANISH: "Natural Method." (Given as an advanced course.)	Bercy's La Langue Française, 1 ^{re} partie. Marion. Le Verbe. Bercy's French Reader. Worman's First Spanish Book. Knapp's Spanish Grammar. Becane's Dictionary.

SECOND YEAR—THIRD CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MATHEMATICS.....	1	4	DESCRIPTIVE GEOMETRY: Orthographic projections, representation of points, lines, and planes; problems relating to the right line and the plane; representations of surfaces of the second order; projections of the sphere.	Church's Descriptive Geometry. Rittenhouse's Exercises in Descriptive Geometry Drawing.
	4	4	TRIGONOMETRY: Measures of arcs and angles; trigonometric functions; analytical investigations of trigonometric formulas, with their application to all the cases of plane and spherical triangles; construction and use of trigonometric tables; inverse trigonometric functions; De Moivre's theorem; solution of trigonometric equations; practical applications of trigonometry to the solution of plane and spherical triangles, the astronomical triangle, and the measurements of heights and distances.	Chauvenet's Trigonometry. Levett and Davison's Plane Trigonometry. Bowditch's Useful Tables.
ENGLISH	2	4	ENGLISH: Rhetoric and composition; choice and use of words; kinds of composition; narration and description; argumentative composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	A. S. Hill's Principles of Rhetoric. Buehler's Practical Exercises in English.* Webster's Dictionary.*
	2	4	LAW: The Constitution of the United States.	Andrews's Manual of the Constitution.
LANGUAGES.....	3	4	FRENCH: "Natural Method."	Modern French Plays. Bercy's French Reader. Jurien de la Gravière's Guerres Maritimes. Knapp's Spanish Grammar.
			SPANISH: "Natural Method." (Given as an advanced course.)	Knapp's Spanish Reader.

SECOND YEAR—THIRD CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
DRAWING.....	4	4	MECHANICAL DRAWING: Sketching from models; the use of instruments; construction of scales; notation and symbols used in mechanical drawings; construction of rectilinear and curved figures to scale; drawing section lines; round writing. Drawing exercises in descriptive geometry, including the projections of lines and the representation of planes and geometrical solids, and the projections and sections of surfaces and solids.	Farner's Mechanical Drawing. Rittenhouse's Exercises in Descriptive Geometry Drawing

SECOND TERM.

PHYSICS.....	4	4	PHYSICS: An elementary course intended to present the leading principles and the correlation of the branches of physical science, to which more time is devoted during the second and first class years. Constant practice with the fundamental and derived units of the C. G. S. system. Practical work in the physical laboratory; experiments illustrating the daily recitations and exact measurements of length, mass, volume, and specific gravity. Lectures. CHEMISTRY: Recitations in general and organic chemistry. Practical work in the chemical laboratory; experiments illustrating the daily recitations and the determination of simple salts, acids, and bases. Lectures.	Daniell's Principles of Physics. Practical Physics, by Stewart and Gea. Remsen's General Chemistry. Lecture Notes.
MATHEMATICS.....	5	4	Stereographic Projections and Solutions of the "Astronomical Triangle." ANALYTICAL GEOMETRY: Equations of the straight line and of the conic sections; transformation of coördinates; properties of the conic sections; equations to tangents and normals; determination of loci, discussion of the general equation of the second degree	Hendrickson and Drexel's Stereographic Projections. C. Smith's Conic Sections.

SECOND YEAR—THIRD CLASS.—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
ENGLISH	2	4	ENGLISH: Classification of words; definition of words by usage and by derivation; synonyms; laws of change in the meaning of words; faults in diction and their remedies; selection and arrangement; elementary principles of reasoning; principles of composition; exercises in the composition of official dispatches, letters, and telegrams. Themes.	Abbott and Seeley's English Lessons for English People. Abbott's How to Write Clearly. Buehler's Practical Exercises in English.* Webster's Dictionary.*
LANGUAGES.....	2	4	FRENCH: Course of the first term continued. SPANISH: Course of the first term continued.	Same as for the first term.
DRAWING	2½	4	MECHANICAL DRAWING: Sketching from models; representation of objects by projections; drawing the projections of models to scale; oblique projections; drawing screws, bolts, nuts, and gearing; round writing.	Faunce's Mechanical Drawing.

THIRD YEAR—SECOND CLASS.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP	1	4	SEAMANSHIP: Use of the compass, lead, and log; signals; blocks and tackles; running rigging; description and use of sails and their fittings; purchasing weights; boats and their management; ground tackle; handling anchors; handling sails; port drills and evolutions; management under sail; duties of naval cadets; rules of the road.	Luce's Seemannship. Department circulars.
STEAM ENGINEERING.	2	4	PRINCIPLES OF MECHANISM: Conversion of circular into reciprocating motion; link work; conversion of reciprocating into circular motion; the teeth of wheels; the use of wheels in trains; aggregate motion; truth of surface and the power of measurement; miscellaneous contrivances.	Goodeve's Elements of Mechanism. Gow's Notes and Problems in Elementary Mechanism.
MECHANICS	5	2	DIFFERENTIAL CALCULUS: Functions; rates; differentials of functions; indeterminate forms; series; maxima and minima; geometrical applications; functions of two or more variables.	Rice and Johnson's Differential Calculus.
	5	2	INTEGRAL CALCULUS: The methods of integration; definite integrals; quadrature of surfaces; cubature of volumes; rectification of curves; centers of gravity; moments of inertia; planimeters; rules for approximate determination of the areas and volumes.	Johnson's Integral Calculus.

THIRD YEAR—SECOND CLASS—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
PHYSICS.....	4	4	<p>PHYSICS: Recitations on simple harmonic motion; wave motions, sound, light, and heat. Practical work in the physical laboratory; experiments illustrating the daily recitations, and some exact measurements, such as the determination of the candle power of gas and electric lights, index of refraction of glass prisms and lenses and of liquids, focal length of lenses; length of light waves. Photography.</p> <p>CHEMISTRY: Short course in chemical analysis.</p>	<p>Daniell's Principles of Physica. Ganot's Physica. Stewart's Treatise on Heat. Practical Physics, by Stewart and Gee. Kohlrausch's Physical Measurements. Lecture Notes.</p> <p>Stoddard's Outline of Qualitative Analysis for Beginners.</p>
ENGLISH	1	4	HISTORY: The history of the United States Navy.	Maclay's History of the United States Navy.
LANGUAGES.....	1	4	FRENCH: Reading and translation of professional articles, and conversation.	Jurien de la Gravière's Guerres Maritimes.
DRAWING	2	4	MECHANICAL DRAWING: Drawing gearing; sketching machinery and making working drawings; round writing; tracings and blue prints of drawings. Topographical and isometrical drawing exercises.	Tomkin's Machine Construction.* Faunce's Mechanical Drawing.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	1	4	Course of the first term continued.	Same as for the first term.
NAVIGATION.....	2	4	THE CELESTIAL SPHERE: Spherical and rectangular coördinates; use of instruments, especially those for determining terrestrial latitudes and longitudes; refraction; dip; parallax; the earth, sun, planets, and solar system in general; different units of time and calendars; laws of universal gravitation, precession, nutation, and aberration; the moon; eclipses and occultations; tides; comets and meteoric bodies; fixed stars; nebulae; motion of the solar system; solutions of the astronomical triangle; use of the Nautical Almanac. Dead reckoning and "day's work."	White's Astronomy Bowditch's Navigator American Ephemeris and Nautical Almanac.
STEAM ENGINEERING.	3	4	MARINE ENGINES: Early history and progress of marine engineering; work and efficiency; nature and properties of heat; application of heat to water; combustion of coal and economy of fuel; arrangement and efficiency of boilers; fittings and mountings of boilers; corrosion and preservation of boilers; efficiency of the steam; methods of increasing the expansive efficiency of steam; compound engines; condensation of steam; regulating and expansion valves and gear; slide valves and fittings; starting and reversing gears; cylinders and their fittings; condensers and fittings; rotatory motion; details of compound and triple-expansion engines; propulsion; screw propellers; the indicator and indicator diagrams; auxiliary machinery and fittings.	Sennett's Marine Steam Engine. Marine Engines: Problems, Notes, and Sketches. 1895.

THIRD YEAR—SECOND CLASS—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MECHANICS.....	5	4	MECHANICS: Kinematics; dynamics; kinetics; hydromechanics; the motion of projectiles; friction and other resistances; the application of mechanical principles to simple machines and to instruments.	Ziwet's Mechanics. Bowser's; Hydromechanics.
PHYSICS.....	4	4	PHYSICS: Recitations in light and heat concluded. Electricity and magnetism commenced. Practical work in the physical laboratory; calibration of thermometers; determination of the hygrometric state of the atmosphere; measurements of the coefficients of expansion and the specific heat and latent heat of various substances; other experiments illustrating the course of study and leading to the skillful use of instruments of precision. Photography. General experiments illustrating the phenomena of statical and voltaic electricity; setting up and comparing galvanic cells and secondary batteries; measuring their resistance and electro-motive force; calibration of galvanometers; determination of dip and horizontal intensity.	Same as for the first term. Thompson's Electricity and Magnetism. Ayrton's Practical Electricity. Day's Exercises in Electrical Measurements.* Lecture Notes.
ENGLISH.....	1	4	HISTORY: The history of the United States Navy.	Macley's History of the United States Navy.
LANGUAGES.....	1	4	FRENCH: Reading French newspapers, and conversation on subjects of the day; themes and written translations.	French newspapers.

FOURTH YEAR—FIRST CLASS—LINE DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	3	4	<p>SEAMANSHIP: Stowage and organization; boats and their management; ground tackle; handling anchors; handling sails; management under sail and under steam; turning and maneuvering; wharfing, docking, towing, anchoring, mooring, etc.; emergencies; port drills and evolutions; duties of officers and crew; routine; rules of the road; laws of storms and management in cyclones; use of sounding machine.</p> <p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in iron and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities; steam steering gear; steam capstan; plans of ships and reproduction in mold loft; finding the displacement of ships and center of buoyancy, etc.</p> <p>NAVAL TACTICS: Organization of the fleet; school of the ship; section and squadron; evolutions of the fleet; signaling by Army and Navy code; Navy and International codes of flag signals.</p>	<p>Luce's Seamanship Department Circulars Navy Regulations.</p> <p>Special Notes and Drawings. Navy Department Pamphlets. White's Manual of Naval Architecture Welch's Text-book of Naval Architecture.</p> <p>Navy and International Signal Books. Fleet Drill Book (Navy Department).</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
ORDNANCE.....	3	4	<p>INSTRUCTIONS FOR INFANTRY AND ARTILLERY: Schools of the squad, company, battalion, and brigade, in close and extended orders; street-riot drill; ceremonies.</p> <p>GUNNERY DRILL: Distribution of the crew to the guns and other stations; duties of officers and men; drill of guns of the main and secondary batteries.</p> <p>GUNS AND GUN MOUNTS: Metals used in their construction; description and manufacture of service guns and their mounts for main and secondary batteries; nomenclature, care, and preservation of the ordnance outfit.</p>	<p>Instructions for Infantry and Artillery, United States Navy.</p> <p>Gunnery Drill Book for the New Armaments.</p> <p>Text-book of Ordnance and Gunnery. Descriptions of Modern Ordnance and Modern Gun Mounts.</p>
NAVIGATION.....	4	4	<p>THE THEORY AND PRACTICE OF NAVIGATION, including instruction in the duties of the navigator, the construction and use of navigating instruments, the use of tables, and the solution of problems; determination of meridian distances.</p> <p>HYDROGRAPHIC SURVEYING: The instruments used; selection and measurements of bases; determination of azimuth of base; triangulation; determination of heights; leveling; plotting a survey; hydrographical surveying; tidal observations; current observations; sailing directions; the form of the earth, with special reference to the construction of charts; projections; running surveys.</p>	<p>Chauvenet's Spherical and Practical Astronomy.*</p> <p>Walker's Navigation. Bowditch's Navigator. American Ephemeris and Nautical Almanac.</p> <p>Phelps's Practical Marine Surveying. Projection Tables. Craig's Azimuth.*</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
MECHANICS	3	1	METHOD OF LEAST SQUARES: The theory of least squares and probable errors; fundamental principles of the theory; practical methods and formulas; independent observations; conditioned observations.	Johnson's Method of Least Squares.
	3	3	APPLIED MECHANICS: Strength of materials; elasticity; stress and strain; theory of structures; strength and deflection of beams; beams of uniform resistance.	Cotterill and Shaler's Lesson in Applied Mechanics. Cotterill's Applied Mechanics.
PHYSICS	3	4	PHYSICS: Recitations in electricity and magnetism; practical work in physical laboratory; determination of the constants of galvanometers; testing ammeters and voltmeters; running dynamos and electric motors and measuring their efficiency; experiments on the electric transmission of energy; testing cables and electric-light wires; experiments upon induction; practice in photography and micro-photography.	Same as for the second class year. Thompson's Dynamic Electric Machinery Lecture Notes

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	4	4	Course of the first term continued...	Same as for the first term.
ORDNANCE.....	5	4	<p>BALLISTICS: The laws of combustion of gunpowder; velocities and pressures in guns; rifling, effect on pressure; the motion of projectiles in a non-resisting medium and in air; computation and use of ballistic and range tables; accuracy and probability of fire; derivation of rules for correcting the errors which occur in gunnery practice; the penetration and effect of projectiles.</p> <p>GUNS: Computation of their elastic strength and shrinkage.</p> <p>AMMUNITION: Its description, preparation, supply, stowage, and use.</p> <p>ARMOR: Description of; use of armor and other protection of matériel and personnel.</p> <p>TORPEDOES: Their description and use.</p>	<p>Interior and Exterior Ballistica. Accuracy and Probability of Fire. Ordnance Notes.</p> <p>The Elastic Strength of Guns. Text-book of Ordnance and Gunnery.</p>
NAVIGATION.....	4	4	<p>THEORY OF THE DEVIATION OF THE COMPASS, including the nature and causes of the several parts of deviation, the determination of the vertical and horizontal forces of the earth and ship, the causes and amount of the heeling error, the changes that take place upon a change of geographical position, the graphic representations of the amount and direction of the forces that act on the needle, and the mechanical correction of the deviation and heeling errors.</p> <p>PRACTICAL NAVIGATION.</p> <p>PRACTICAL SURVEYING.</p>	<p>Admiralty Manual for the Deviations of the Compass.</p> <p>Diehl's Practical Problems and the Compensation of the Compass in the United States Navy.*</p>

FOURTH YEAR—FIRST CLASS—LINE DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
ENGLISH	2	4	INTERNATIONAL LAW: The objects, sources, and sanctions of international law; the laws of war, embargo, reprisal, and retorsion; blockade; contraband of war; right of search; ship's papers and nationality; prizes; privateering; piracy; the rights and duties of neutrals; jurisdiction over vessels at sea and in territorial waters; fugitives and deserters; licenses to trade; recaptures.	Woolsey's International Law.
	1	4	SPECIAL INSTRUCTIONS: General description of the human body and its functions; the arrest of hemorrhage; resuscitation from drowning; alcoholic drinks, tobacco, and other narcotics. (Lectures and practical instruction Fridays, 7:30 to 9:30 p. m., additional.)	Martin's The Human Body and the Effects of Narcotics.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION.

FIRST TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	2	4	<p>NAVAL CONSTRUCTION: Definitions; history and practice of shipbuilding in iron, and steel; systems of construction, subdivision, and armoring; systems of pumping, draining, ventilating, steering, and hoisting; fittings in general; distribution of armor, guns, and boats; special constructions; launching; types of ships; structural strength and strains; buoyancy and stability in the intact and the damaged conditions; theory and observation of waves; rolling and pitching; principles of stowage; resistance, propulsion, and steering of ships; qualities of ships; construction and use of diagrams of qualities; the use of qualities; steam steering gear; steam capstan; plans of ships and reproduction in mold loft; finding the displacement of ships and center of buoyancy, etc.</p>	<p>Special Notes and Drawings. Navy Department Pamphlets. White's Manual of Naval Architecture. Welch's Text-book of Naval Architecture.</p>
STEAM ENGINEERING.	3	4	<p>MARINE ENGINES: Horse-power, nominal and indicated, and the efficiency of the engine; resistance of ships and indicated horse-power necessary for speed; space occupied by, and general description of, modern marine machinery; engines, simple and compound; expansion of steam, mean pressure, etc.; piston speed, stroke of piston, revolutions, size of cylinder, cylinder fittings, etc.; the piston, piston-rod, connecting-rod; shafting, cranks, and crank shafts, etc.; foundations, bed-plates, columns, guides, and framing; the condenser, pumps; valves and valve gear; valve diagrams, etc.; propellers; sea cocks and valves; fitting in of machinery, starting and reversing of engines; materials used by the marine engineer.</p>	<p>Seaton's Marine Engineering.</p>

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

FIRST TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
STEAM ENGINEERING—Continued.	2	4	BOILERS: Fuel, etc., evaporation; proportions; water-tube boilers; boiler details; mountings and fittings; wear and tear; repairs; performance; corrosion; determining the heating value of fuels; forced and natural draught and resistances; measurement of heat produced and wasted; analysis of waste gases; strength of boiler material; design; construction; board of trade rules; management; liquid fuel.	Seaton's Marine Engineering. Stromeyer's Marine Boiler Management and Construction.
	3	4	DESIGNING MACHINERY: Materials used in machine construction; straining actions to which machines are subjected; resistance of structures to different kinds of straining action; fastenings, riveted joints, bolts, nuts, keys, and cotters; pipes and cylinders; journals, pivots, axles, and shafting; crank-shaft design; practical designing of various parts of machines.	Unwin's Elements of Machine Design—Parts I and II.
MECHANICS	3	4	Same as for the line division	Same as for the line division.
PHYSICS	3	4	Same as for the line division	Same as for the line division.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

SECOND TERM.

Department.	Number of recitations a week.	Number of months.	Subjects.	Text-books.
SEAMANSHIP.....	2	4	Course of the first term continued.	Same as for the first term.
STEAM ENGINEERING.	3	4	MARINE ENGINES: Physical properties of steam; convertibility of heat and work, internal work; theory of the steam engine; characteristics of a perfect gas; completely superheated steam; thermodynamics of a perfect gas; theory of a heat engine working with a perfect gas; absolute scale of temperatures; performance of a perfect-heat engine; perfect steam engine; generation and expansion of steam; Carnot's principle; comparison of steam and air engines; adiabatic equation; adiabatic curves; nature of the process of expansion; area of the diagram of energy, mean temperature of supply; entropy; temperature entropy diagram; thermal indicator diagram; entropy of air and steam; losses of efficiency in heat engines; clearance and wire-drawing; feed-water heaters; utilization of low temperatures; formulae connecting the pressure and temperature of saturated steam; dilatation and specific heat of water; geometry of the curve $PV^n = \text{Constant}$. Casting and moulding; pattern making and casting design; smithing and forging; boiler making and plate work; laying off machine work; erecting machinery; metals and alloys.	Cotterill's Steam Engine Considered as a Thermodynamic Machine. Lineham's Mechanical Engineering, Part I.
	3	4	BOILERS: Designing and drawing ...	Same as for the first term, with notes.
	4	4	DESIGNING MACHINERY: Designing and drawing.	Same as for the first term, with notes.

FOURTH YEAR—FIRST CLASS—ENGINEER DIVISION—Continued.

SECOND TERM—continued.

Department.	Number of recitations a week.	Number of months.	Subjects	Text-books.
STEAM ENGINEERING—Continued.	3	4	EXPERIMENTAL ENGINEERING: Object of engineering experiment; classification of experiment; errors—probability, classification, and rejection; graphical representation of experiments; autographic diagrams; apparatus; testing machines; methods of testing materials of construction; friction testing of lubricants; measurement of power; measurements by meters; flow of steam; gas meters; anemometers; tests of pumps; measurement of pressure; measurement of temperature; measurement of moisture in steam; methods of testing steam boilers; the indicator and the indicator diagram; methods of testing steam engines; experimental determination of inertia; the injector and pulsometer; valve diagrams; refrigerating machinery; standardizing indicators and instruments of precision; dynamometric tests of propellers, etc.	Carpenter's Experimental Engineering.
	1	1	SPECIAL INSTRUCTION: Same as for the line division.	Same as for the line division.

ASSIGNMENT OF TIME.

Departments.	Fourth class.		Third class.		Second class.		First class, line division.		First class, engineer division.	
	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.	1st term.	2d term.
Seamanship.....	.....	.....	.....	.....	1	1	3	4	2	2
Ordnance.....	.....	.....	.....	.....	.....	.....	3	5	.....	.....
Navigation.....	.....	.....	.....	.....	.....	2	4	4	.....	.....
Steam Engineering.....	.....	.....	.....	.....	3	3	.....	.....	8	13
Mechanics.....	.....	.....	.....	.....	5	4½	3	.....	3	.....
Physics.....	.....	.....	.....	4F	4	4	3	.....	3	.....
Mathematics.....	6	5	5	5	.....	.....	.....	.....	.....	.....
English.....	5	5	4	2	1	1	.....	2	.....	.....
Languages.....	5	5½	3	2	1F	1F	.....	.....	.....	.....
Drawing.....	.....	.....	4	2½	2	.....	.....	.....	.....	.....

SPECIAL INSTRUCTION.

The effects of alcohol, tobacco, and other narcotics.....	½ F	½ F
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5633—7

F Friday 7:30 to 9:30 p. m.

PROGRAMME OF RECITATIONS.

FIRST TERM.

Department	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.
Seamanship			M. (3)	T. W. Th. (3)	T. W. (3)
Ordnance				T. Th. (3), F. (3)	
Navigation				M. (3), W. F. S. (1)	
Steam Engineering			W. Th. F. (3)		{ W. F. S. (1), T. Th. (2), M. Th. F. (3) }
Mechanics			M. T. W. F. (1), Th. (2)	M. W. F. (2)	M. W. F. (2)
Physics			M. T. W. F. (3)	M. T. Th. (1)	M. T. Th. (1)
Mathematics	M. T. W. Th. F. S. (1)	M. T. W. Th. F. (3)			
English	M. T. W. Th. F. (2)	M. F. S. (1), T. (3)	Th. (1)		
Languages	M. T. W. Th. F. (3)	T. W. Th. (1)	F. (1:30 to 3:30 p.m.) ^o		
Drawing		M. W. Th. F. (3)	T. (3), S. (1)		

SECOND TERM.

Seamanship			W. (3)	M. T. W. Th. (3)	W. Th. (3)
Ordnance				M. T. Th. (3), W. (1), F. (3)	
Navigation			M. T. (3)	M. T. Th. F. (1)	
Steam Engineering			W. Th. F. (3)		{ M. T. W. Th. F. (1), M. T., W. Th. F. (3), M. T. F. (3) }
Mechanics			M. W. Th. F. S. (1)†		
Physics	{ M. T. W. F. (3), F. (1:30 to 3:30 p.m.) ^o }		M. Th. F. (3), T. (1)		
Mathematics	M. T. W. Th. F. (1)			W. F. (3)	
English	M. T. W. Th. F. (1)		T. (3)		
Languages	M. T. W. Th. F. (3), S. (1) ^o		F. (1:30 to 3:30 p.m.) ^o		
Drawing	Th. (3), F. (3), S. (1) ^o				
Hydrotel Instruction (Psychology and Hygiene)				M. (1), F. (1:30 to 3:30 p.m.) ^o	M. (1), F. (1:30 to 3:30 p.m.) ^o

of course and practical instruction

Saturday journal, unused term, from January 31 to March 30

TABLE OF COEFFICIENTS.

Department and subjects.	Fourth class.	Third class.	Second class.	First class, line division.	First class, engineer division.	Maxima for four years, line division.	Maxima for four years, engineer division.	Maxima for final graduation, line division.	Maxima for final graduation, engineer division.
Discipline:									
Conduct	3	5	7	8	8	160	160		
Efficiency	1	3	5	8	8				
<i>Seamanship.</i>									
Seamanship, Naval Construction, and Naval Tactics*			8	13	8		44	56	38
Practice Cruise				2		72			
<i>Ordnance.</i>									
Ordnance Instructions, Infantry Tactics, and Gunnery				115		60		44	
Ordnance and Gunnery									
<i>Navigation.</i>									
Astronomy, Navigation, and Surveying			8	12			12	44	
Practice Cruise				2		68			
<i>Steam Engineering.</i>									
Principles of Mechanism and Marine Engines			8					20	
Practice Cruise			3		5	40			
Marine Engines					10				72
Designing Machinery					12				36
Boilers					8				40
Experimental Engineering					5		200		
<i>Mechanics.</i>									
Differential and Integral Calculus, and Mechanics			12						
Least Squares and Strength of Materials				5	5	68	68		
<i>Physics.</i>									
Chemistry and Physics		4							
Physics			10	5	5	76	76		
<i>Mathematics.</i>									
Algebra and Geometry	5								
Trigonometry, Analytical Geometry, and Descriptive Geometry		10				60	60		
<i>English.</i>									
English and History	5		2						
English and Law		5					48		
International Law				4		64		24	
<i>Languages.</i>									
French, and Spanish	5	5	2			48	48	28	28
<i>Drawing.</i>									
Mechanical Drawing		6	3			36	31		
<i>Miscellaneous.</i>									
Special Instructions (Physiology and Hygiene)				2	2	8	8		
Cruise Report								16	16
Navigation Note Book,† Journals, and Station Bills								8	16
Maxima for each class	76	152	228	304	304	700	700	240	240

*Seamanship and Naval Tactics for line division alone.

†In making up the standing for a year the second term is given double the weight of the first term.

‡Navigation note-books for line division alone.

PRACTICAL INSTRUCTION OF CADETS.

SEAMANSHIP.

Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sailmaking; making up, bending, untying, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signal; Army and Navy code; management of steam launches; steam fleet tactics with steam launches.

ORDNANCE.

Infantry, schools of the squad, company, and battalion, in close and extended orders; artillery, schools of the battery and battalion; exercise and target practice with small arms and guns of main and secondary batteries; exercise with cut and thrust, smallsword, and broadsword; handling and firing torpedoes, use of Richk's and Rodman testing machines; determinations of velocities; experimental determination of range tables, also of the jump and drift; the preparation, inspection, care and preservation of ordnance material.

Six medals are awarded annually for marksmanship: Gold, silver, and bronze medals to the cadets of the first class, as first, second, and third prizes, respectively for excellence in rapid-fire gun practice; and gold, silver, and bronze medals to the cadets of the second class, as first, second, and third prizes, for excellence in practice with the service rifle and revolver.

In May, 1896, the medals for rapid-fire gun practice were awarded as follows:

Gold medal to Cadet C. M. Tozer.

Silver medal to Cadet D. M. Wood.

Bronze medal to Cadet T. T. Craven.

The medals for small-arm marksmanship for 1896 were awarded as follows:

Gold medal to Cadet J. J. Brown.

Silver medal to Cadet T. L. Johnson.

Bronze medal to Cadet J. A. Hand.

At the competitive company drill on June 8, 1896, the battalion colors were awarded to the First Company—Cadet-Lieutenant T. T. Craven, commanding—being the best-drilled company.

NAVIGATION.

Navigation: Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth.

Surveying: Surveying and constructing a chart of a portion of the Severn River.

Compass Deviations: Swinging an iron ship, and observing the deviations at the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact coefficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a Navy compensating binnacle.

STEAM ENGINEERING.

Ship work: The Pattern Shop: Selection and treatment of different woods for different purposes. Elementary work of the carpenter shop, through mortising, joining, etc., to finished pattern work.

The Foundry: Iron and brass casting; the making of bronzes, alloys, etc.

The Blacksmith Shop: Forging, welding, etc.; tempering, case hardening, etc.; welding and quenching tests of metals.

The Boiler Shop: Riveting, soft and hard patching, calking, annealing, tube expanding, etc.; testing.

The Machine Shop: Vise bench work; machine tool work; including the setting of work; turning; planing; boring; slotting, etc.; pipe fitting; building, erection, and aligning of engines and engine fitting; preparation of working drawings and working from the same.

Ship work: Management of main and auxiliary engines; getting up steam at leisure and in emergencies; fire-room and engine-room routine, firing, water-tending, and oiling; routine under way when desirable to obtain maximum speed; same for maximum steaming radius; management of engines while maneuvering at sea; determining the condition and locating defects in machinery while in motion; causes and prevention of explosion of boilers, steam pipes, gases in uptakes and in coal bunkers; lying under banked fires; coming to anchor; overhauling machinery; cleaning boilers and condensers; preservation of machinery of a vessel when out of commission; conducting progressive and full-power trials and the collecting of data.

Ordinary Casualties: Hot crown sheets, burst feed pipes, leaky boiler tubes and seams, burnt grate bars, hot pins and journals, fire in bunkers, flooded compartments.

Damages received in battle: Preparations for action; temporary repairs and alternative devices and expedients to be adopted in event of receiving injury from shot or torpedoes; quick methods of disabling machinery about to fall into the hands of the enemy.

Miscellaneous: Use of slide rule, averaging machine, apparatus for testing oils and smoke gases; standardizing steam gauges and indicators; preparing specifications for purchase of machinery and stores; testing, inspection, and preservation of stores; preparation of various cements, paints, and varnishes in ordinary use; selection of coals; making estimates of the amount of coal on hand, prevention of deterioration, etc.; making of watch, quarter, and station bills.

PHYSICAL TRAINING.

Class drills in calisthenics, free movements and with apparatus.

Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

PROGRAMME OF PRACTICAL INSTRUCTION.

[When more than one kind of exercise is prescribed during a week, the number of each exercise is indicated by a figure in parentheses.]

FIRST CLASS.

Academic month.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896					
Oct...	8	Company.	Target, great guns (4). Seamanship (1).	Artillery.	Steam tactics (4). Seamanship (1).
	10	Artillery.	Steam tactics (4). Battery drill (1).	Company.	Target, great guns (4). Battery drill (1).
	17	Target, great guns (4). Seamanship (1).	Company.	Steam tactics (4). Seamanship (1).	Artillery.
	24	Steam tactics (4). Battery drill (1).	Artillery.	Target, great guns (4). Battery drill (1).	Company.
	31	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
Nov..	7	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	21	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
Dec..	28	Steam.	Practical ordnance.	Practical electricity.	Sword exercise.
	5	Practical electricity.	Sword exercise.	Steam.	Practical ordnance.
	12	Practical ordnance.	Steam.	Sword exercise.	Practical electricity.
	19	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.
26 No drills. [See note.]					
1897					
Jan..	2	Steam.	Practical ordnance.	Practical electricity.	Sword exercise.
	9	Practical electricity.	Sword exercise.	Steam.	Practical ordnance.
	16	Practical ordnance.	Steam.	Sword exercise.	Practical electricity.
	23	Sword exercise.	Practical electricity.	Practical ordnance.	Steam.
30 Semi-annual examination. [No drills.]					
Feb	6	Steam.	Seamanship.	Practical electricity.	Sword exercise.
	13	Practical electricity.	Sword exercise.	Steam.	Seamanship.
	20	Seamanship.	Steam.	Sword exercise.	Practical electricity.
	27	Sword exercise.	Practical electricity.	Seamanship.	Steam.
Mar	6	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	13	Target, great guns (4). Battery drill (1).	Steam tactics (4). Seamanship (1).	Skirmish (4). Battery drill (1).	Torpedoes (4). Seamanship (1).
		Boats (1).	Boats (1).	Boats (1).	Boats (1).

FIRST CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897					
Mar..	20	Skirmish (4). Seamanship (1). Boats (1).	Torpedoes (4). Landing party (1). Boats (1).	Target, great guns (4). Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1). Boats (1).
	27	Steam tactics (4). Seamanship (1). Boats (1).	Target, great guns (4). Battery drill (1). Boats (1).	Torpedoes (4). Seamanship (1). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr..	3	Torpedoes (4). Landing party (1). Boats (1).	Skirmish (4). Seamanship (1). Boats (1).	Steam tactics (4). Landing party (1). Boats (1).	Target, great guns (4). Seamanship (1). Boats (1).
	10	Steam tactics (4). Landing party (1). Seamanship (1).	Steam tactics (4). Seamanship (2).	Steam tactics (4). Landing party (1). Seamanship (1).	Steam tactics (4). Seamanship (2).
	17	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	24	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May..	1	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	8	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).	Deviation compass (4). Seamanship (2).
	15	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S. 22	Battle drill.	Battle drill.	Battle drill.	Battle drill.
May..	29	Annual examination. [No drills.]			
June.	4	Drills for Board of Visitors, as per orders.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month. Cadets of the Engineer Division of the first class will take part in drills on board the practice ship when underway, in "Practical electricity," in "General steam tactics," and at "Fire quarters." At other times they will have "Steam drill."

SECOND CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896					
Oct...	3	Company.	Target, machine guns (4). Seamanship (1).	Artillery.	Steam tactics (4). Seamanship (1).
	10	Artillery.	Steam tactics (4). Battery drill (1).	Company.	Target, machine guns (4). Battery drill (1).

SECOND CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896					
Oct...	17	Target, machine guns (4). Seamanship (1).	Company.	Steam tactics (4).	Artillery
	24	Steam tactics (4).	Artillery.	Seamanship (1). Target, machine guns (4).	Company.
Nov.		Battery drill (1).		Battery drill (1).	
	31	Battalion infantry.	Battalion infantry.	Battalion infantry	Battalion infantry
	7	Seamanship.	Seamanship.	Seamanship.	Seamanship
	14	Seamanship	Seamanship.	Seamanship.	Seamanship
	21	Battalion artillery.	Battalion artillery.	Battalion artillery	Battalion artillery
Dec...	28	Steam.	Signals (3). Seamanship (2)	Steam.	Sword exercise
	5	Steam.	Sword exercise.	Steam.	Signals (3). Seamanship (2)
	12	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam
	19	Sword exercise.	Steam.	Signals (3) Seamanship (2).	Steam.
	26	No drills. [See note.]			
1897					
Jan.	2	Steam.	Signals (3). Seamanship (2).	Steam.	Sword exercise.
	9	Steam.	Sword exercise.	Steam.	Signals (3). Seamanship (2)
	16	Signals (3). Seamanship (2).	Steam.	Sword exercise.	Steam
	23	Sword exercise.	Steam.	Signals (3). Seamanship (2).	Steam
20 Semi-annual examination. [No drills.]					
Feb.	6	Steam.	Practical ordnance	Steam.	Sword exercise
	13	Steam.	Sword exercise.	Steam.	Practical ordnance
	20	Practical ordnance	Steam.	Sword exercise.	Steam
	27	Sword exercise.	Steam.	Practical ordnance	Steam.
Mar.	6	Battalion artillery (4)	Battalion artillery (4)	Battalion artillery (4)	Battalion artillery (4)
		Seamanship (1).	Seamanship (1).	Seamanship (1).	Seamanship (1).
	13	Target, great guns (4)	Steam tactics (4)	Skirmish (4).	Target, small arms
		Battery drill (1).	Seamanship (1).	Battery drill (1).	Seamanship (1).
		Boats (1).	Boats (1).	Boats (1).	Boats (1).
	20	Skirmish (4).	Target, small arms (4)	Target, great guns (4)	Steam tactics (4)
		Seamanship (1).	Landing party (1).	Seamanship (1)	Landing party (1)
		Boats (1).	Boats (1).	Boats (1).	Boats (1).
	27	Steam tactics (4).	Target, great guns (4)	Target, small arms (4)	Skirmish (4)
		Seamanship (1).	Battery drill (1)	Seamanship (1).	Battery drill (1)
		Boats (1).	Boats (1)	Boats (1).	Boats (1).
Apr.	3	Target, small arms (4)	Skirmish (4).	Steam tactics (4)	Target, great guns (4)
		Landing party (1)	Seamanship (1).	Landing party (1)	Seamanship (1)
		Boats (1).	Boats (1).	Boats (1).	Boats (1).
	10	Seamanship (5).	Seamanship.	Seamanship (5)	Seamanship
		Landing party (1)		Landing party (1)	

SECOND CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897					
Apr ..	17	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	24	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May ..	1	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	8	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	15	Battalion infantry(5) Seamanship (1).	Battalion infantry(5) Seamanship (1).	Battalion infantry(5) Seamanship (1).	Battalion infantry(5) Seamanship
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Steam tactics.	Steam tactics.	Steam tactics.	Steam tactics.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.22	Battle drill.	Battle drill.	Battle drill.	Battle drill.
	29	Annual examination. [No drills.]			
June .	4	Drill for Board of Visitors, as per orders.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month.

THIRD CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896					
Oct...	3	Company.	Boats (4). Seamanship (1).	Artillery.	Boats (4). Seamanship (1).
	10	Artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill (1).
	17	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Artillery.
	24	Boats (4). Battery drill (1).	Artillery.	Boats (4). Battery drill (1).	Company.
	31	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
Nov ..	7	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	21	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	28	Steam.	Seamanship.	Target, small arms(3) Great guns (2).	Sword exercise.
Dec ..	5	Target, small arms(3) Great guns (2).	Sword exercise.	Steam.	Seamanship.
	12	Seamanship.	Steam.	Sword exercise.	Target, small arms(3) Great guns (2).
	19	Sword exercise.	Target, small arms(3) Great guns (2).	Seamanship.	Steam.
	26	No drills. [See note.]			

THIRD CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897					
Jan...	2	Steam.	Seamanship.	Target, small arms (3). Great guns (2). Steam.	Sword exercises.
	9	Target, small arms (3). Great guns (2).	Sword exercises.	Steam.	Seamanship.
	16	Seamanship.	Steam.	Sword exercises.	Target, small arms 3. Great guns (2). Steam.
	23	Sword exercises.	Target, small arms (3). Great guns (2).	Seamanship.	
	30	Semi-annual examination. [No drills.]			
Feb...	6	Steam.	Signals (3). Seamanship (2).	Target, small arms (3). Great guns (2). Steam.	Sword exercises.
	13	Target, small arms (3). Great guns (2).	Sword exercises.	Steam.	Signals (3). Seamanship (2).
	20	Signals (3). Seamanship (2).	Steam.	Sword exercises.	Target, small arms 3. Great guns (2). Steam.
	27	Sword exercises.	Target, small arms (3). Great guns (2).	Signals (3). Seamanship (2).	
Mar...	6	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	13	Target, small arms (4). Battery drill (1). Boats (1).	Seamanship (6). Boats (1). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).	Boats (4). Seamanship (1). Boats (1).
	20	Skirmish (4). Seamanship (1). Boats (1).	Boats (5). Landing party (1).	Target, small arms (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).
	27	Seamanship (5). Boats (1).	Target, small arms (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr...	3	Boats (5). Landing party (1).	Skirmish (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).	Target, small arms (4). Seamanship (1). Boats (1).
	10	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.
	17	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	24	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May	1	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	8	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	15	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).
	M.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T.	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.

THIRD CLASS—Continued.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1897					
May..	W.	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th.	Boats.	Boats.	Boats.	Boats.
	F.	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.	Battle drill.	Battle drill.	Battle drill.	Battle drill.
May..	29	Annual examination. [No drills.]			
June..	4	Drills for Board of Visitors, as per orders.			
June 10 to Aug. 28.		Practice cruises.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month.

FOURTH CLASS.

Academic months.	Week ending—	First division.	Second division.	Third division.	Fourth division.
1896					
Oct...	3	Company.	Boats (4). Seamanship (1).	Artillery.	Boats (4). Seamanship (1).
	10	Artillery.	Boats (4). Battery drill (1).	Company.	Boats (4). Battery drill (1).
	17	Boats (4). Seamanship (1).	Company.	Boats (4). Seamanship (1).	Artillery.
	24	Boats (4). Battery drill (1).	Artillery.	Boats (4). Battery drill (1).	Company.
	31	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
Nov..	7	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	14	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	21	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	28	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
Dec..	5	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	12	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	19	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	26	No drills. [See note.]			
1897					
Jan...	2	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	9	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).
	16	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.

FOURTH CLASS—Continued.

Academic months.	Week ending	First division.	Second division.	Third division.	Fourth division.
1897					
Jan.	23	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.
	30	Semi-annual examination. [No drills].			
Feb.	6	Gymnastics.	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).
	13	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (2).
	20	Dancing (3). Seamanship (2).	Gymnastics.	Dancing (3). Great guns (2).	Gymnastics.
	27	Dancing (3). Great guns (2).	Gymnastics.	Dancing (3). Seamanship (3).	Gymnastics.
Mar.	6	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).	Battalion artillery (4). Seamanship (1).
	13	Gymnastics (4). Battery drill (1). Boats (1).	Seamanship (5). Boats (1).	Skirmish (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).
	20	Skirmish (4). Seamanship (1). Boats (1).	Boats (5). Landing party (1).	Gymnastics (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).
	27	Seamanship (5). Boats (1).	Gymnastics (4). Battery drill (1). Boats (1).	Boats (5). Seamanship (1).	Skirmish (4). Battery drill (1). Boats (1).
Apr.	3	Boats (5). Landing party (1).	Skirmish (4). Seamanship (1). Boats (1).	Seamanship (4). Landing party (1). Boats (1).	Gymnastics (4). Seamanship (1). Boats (1).
	10	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.
	17	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).
	24	Battery drill (5). Seamanship (1).	Seamanship.	Battery drill (5). Seamanship (1).	Seamanship.
May	1	Seamanship.	Seamanship (5). Landing party (1).	Seamanship.	Seamanship (5). Landing party (1).
	8	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).	Company (4). Seamanship (2).
	15	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).	Battalion infantry (5). Seamanship (1).
	M	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	T	Battalion artillery.	Battalion artillery.	Battalion artillery.	Battalion artillery.
	W	Seamanship.	Seamanship.	Seamanship.	Seamanship.
	Th	Boats.	Boats.	Boats.	Boats.
	F	Battalion infantry.	Battalion infantry.	Battalion infantry.	Battalion infantry.
	S.S.	Battle drill.	Battle drill.	Battle drill.	Battle drill.
May	29	Annual examination. [No drills.]			
June	6	Drills for Board of Visitors, as per orders.			

Drills will be suspended from December 24 to January 2. There will be "Fire quarters" on one Wednesday afternoon in each month.



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